

CONTRACT

SPECIAL PROVISIONS

Project No.: SP-0068(22)50

Name: SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215
SAFETY/TRAFFIC OPERATIONS

County: SALT LAKE

Bid Opening: JUNE 10, 2003
Date



2002 - U.S. Standard Units (Inch-Pound Units) March 27, 2003

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I. 2002 Standard Specifications

The State of Utah Standard Specifications for Road and Bridge Construction, U.S. Standard Units (Inch Pound Units) CSI Format, Edition of 2002 with Changes One and Two included applies on this project as a static Specification Book.

Refer to Part II (List of Revised Standard Specifications) and Part XI (Special Provisions) for other project specific specifications.

II. List of Revised Standard Specifications

Change One – Included in 2002 Standard Specifications

Revised August 29, 2002

Section 00570 Articles 1.2 A 69, A 71 b (deleted)
Section 00727 Articles 1.1 D; 1.5 B; 1.9; 1.10; 1.16 B, C; 1.18 B
Section 01574 Articles 1.2 B
Section 02721 Articles 1.2 D (added), H (replaced), I (deleted); 1.6 B1; 2.1 A Table 3; 3.2 C
Section 02741 Articles 3.8 E 2 a, b
Section 02821 Articles 3.1 A
Section 02892 Articles 1.5 A, B
Section 02936 Articles 1.4; 1.5 C
Section 03152 Articles 1.2 P, Q; 2.2 A, B
Section 05120 Articles 1.4 A (deleted), 3.3 A
Section 16525 Articles 1.6 A, B

Change Two – Included in 2002 Standard Specifications

Revised December 19, 2002

Section 01561 Article 3.1 A
Section 02075 Article 2.7 A
Section 02372 Article 2.1 A 4
Section 02455 Article 3.3 B 2
Section 02785 Article 3.2 C
Section 02861 Article 3.3 A
Section 03055 Articles 1.2 P (inserted), 2.3 B, 2.4 (deleted), 2.7 A 1 a-e (added), 2.7 B 2 (added), 2.8 A 1 a, 2.8 A 2 (deleted), 2.9 A3, 3.2 A Table, 3.2 C, 3.7 A 3, 3.8 C 1, 3.9 A-B, 3.10, 3.11 B 1, 3.11 B 3
Section 07922 Article 2.1 Table 1

Change Three

Revised February 27, 2003

Section 01355 Article 1.3 A 3

Section 01721 1.4 C deleted and moved to Measurement and Payment document

Section 02222 Changed title from Site Demolition-Pavement to Site Demolition -
Concrete, A, 3.2 Title, 3.2 A

Section 02224 New Specification

Section 02316 1.2 A, D, I added, 1.3 added, 1.7 B, C, D, E, F, G added, 3.9 A added

Section 02455 3.3 B 2 (corrected error from change two)

Section 02721 1.2 Related Sections added, 1.3 H and I added, 1.7 B, 1.7 F deleted,
2.1 B added, 2.2 deleted, 3.1 Title changed, 3.2 B reference added, 3.2 E added

Section 02741 1.4 C6a added, 1.4 H, Table 3, 2.4 A, 2.4 C, Table 9, 2.5 B 1-3,
2.5 B 4 added, 2.5 D, 3.1 A1 deleted, 3.2 C3 added, 3.7 D1, 3.9 B4, 3.9 B5
added, 3.9 E note added

Section 02744 Entire Section deleted

Section 02745 1.4 A9

Section 02785 1.2 C and D added

Section 02892 Added Articles, 1.3 N, O, Y, 1.5 D, 2.4 I, 2.5 C, D, E, 2.6 B3 - B6,
2.6 C, 2.16, 2.17, 3.11 and Revised Articles 3.5 F and Table Number,
3.5 G and Table Number

Section 02896 2.1 A, B and 3.1 A drawing number corrected

Section 16525 1.2 H

III. List of Revised Standard Drawings

Change One

Revised December 19, 2002

AT 7	Polymer Concrete Junction Box Details	12/19/2002
BA 1A	Precast Concrete Full Barrier Standard Section	12/19/2002
BA 1B	Precast Concrete Full Barrier Standard Section	12/19/2002
BA 3	Cast In Place Constant Slope Barrier	12/19/2002
BA 4B	Beam Guardrail Installations	12/19/2002
BA 4C	Beam Guardrail Anchor Type I	12/19/2002
CC 6	Crash Cushion Type E Sand Barrel Details	12/19/2002
DG 3	Maximum Fill Height and End Sections for HDPE And PVC Pipes	12/19/2002
DG 4	Pipe Culverts Minimum Cover	12/19/2002
EN 4	Temporary Erosion Control (Drop-Inlet Barriers)	12/19/2002
GW 1	Raised Median and Plowable End Section	12/19/2002
PV 2	Pavement Approach Slab Details	12/19/2002
SL 13	Traffic Counting Loop Detector Details	12/19/2002
SN 2	Flashing School Sign	12/19/2002
SN 4	Flashing Stop Sign	12/19/2002
SN 5	Typical Installation For Milepost Signs	12/19/2002
SN 8	Ground Mounted Timber Sign Post (P1)	12/19/2002
ST 1	Object Marker "T" Intersection and Pavement Transition Guidance	12/19/2002
ST 7	Pavement Markings and Signs at Railroad Crossings	12/19/2002
SW 3A	Precast Concrete Noise Wall 1 of 2	12/19/2002
SW 3B	Precast Concrete Noise Wall 2 of 2	12/19/2002
SW 4A	Precast Concrete Retaining/Noise Wall 1 of 2	12/19/2002

Change Two

Revised February 27, 2003

GW 2	Concrete Curb and Gutter	02/27/2003
GW 5	Pedestrian Access	02/27/2003

IV. Materials Minimum Sampling and Testing

Follow the requirements of the Current Materials Minimum Sampling and Testing Manual:

Materials Minimum Sampling and Testing Manual reference can be found from the UDOT Web Site at:

<http://www.dot.utah.gov/esd/Manuals/Materials/MaterialsSampling.htm>

For UDOT employees the Manual can also be found on the Shared Drive at: \\Shared\\Engineering Services\\Manuals\\Materials (W drive for the Complex and R drive for the Regions)

V. Notice to Contractors



NOTICE TO CONTRACTORS

Sealed proposals will be received by the Utah Department of Transportation UDOT/DPS Building (4th Floor), 4501 South 2700 West, Salt Lake City, Utah. 84114-8220, until 2 o'clock p.m. Tuesday, June 10, 2003, and at that time the download process of bids from the USERTrust Vault to UDOT will begin, with the public opening of bids scheduled at 2:30 for SAFETY/TRAFFIC OPERATIONS of SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215 in SALT LAKE County, the same being identified as State Project No: SP-0068(22)50.

Federal Regulations:

Wage Rate Non-Applicable.

Project Location: 0.41 Miles of Route: 68 from R.P. 050.52 to R.P. 050.93

The principal items of work are as follows (for all items of work see attachment):

Portland Cement Concrete Pavement 11 inch Thick
Traffic Control
HMA - 3/4 inch

The project is to be completed: in 70 Working Days.

Other Requirements:

All project bidding information, including Specifications and Plans, can be viewed, downloaded, and printed from UDOT's Project Development Construction Bid Opening Information website, <http://www.dot.utah.gov/cns/bidopeninfo.htm>. To bid on UDOT projects, bidders must use UDOT's Electronic Bid System (EBS). The EBS software and EBS training schedules are also available on this website.

Project information can also be reviewed at the main office in Salt Lake City, its Region offices, and its District offices in Price, Richfield, and Cedar City.

Project Plans cannot be downloaded or printed from the website unless your company is registered with UDOT. Go to UDOT's website to register. Unregistered companies may obtain the Specifications and Plans from the main office, 4501 South 2700 West, Salt Lake City, (801) 965-4346, for a fee of \$20.00, plus tax and mail charge, if applicable, none of which will be refunded.

Prequalification of bidders is required. Prior to submitting a bid, the bidder must have on file with the Utah Department of Transportation a completed and approved contractor's application for prequalification. Department processing time is 10 working days from receipt of properly executed documentation.

As required, a contractor's license must be obtained from the Utah Department of Commerce.

Each bidder must submit a bid bond from an approved surety company on forms provided by the Department; or in lieu thereof, cash, certified check, or cashier's check for not less than 5% of the total amount of the bid, made payable to the Utah Department of Transportation, showing evidence of good faith and a guarantee that if awarded the contract, the bidder will execute the contract and furnish the contract bonds as required.

The right to reject any or all bids is reserved.

If you need an accommodation under the Americans with Disabilities Act, contact the Construction Division at (801) 965-4346. Please allow three working days.

Additional information may be secured at the office of the Utah Department of Transportation, (801) 965-4346.

Dated this 17th day of May, 2003.

UTAH DEPARTMENT OF TRANSPORTATION
John R. Njord, Director

Revised Date:

VI. EQUAL OPPORTUNITY (STATE PROJECTS)

Selection of Labor:

During the performance of this contract, the Contractor shall not discriminate against labor from any other State, possession, or territory of the United States.

Employment Practices:

During the performance of this contract, the Contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, religion, sex, color, national origin, age, or disability. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, sex, color, national origin, age, or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provide by the State Highway Department setting forth the provisions of this nondiscrimination clause.

The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, sex, color, national origin, age, or disability.

The Contractor will send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided by the State Highway Department advising the said labor union or worker' representative of the Contractors commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further State contracts.

The Contractor will include the provisions of this Section in every subcontract or purchase order so that such provision will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the State Highway Department may direct as a means of enforcing such provisions including sanctions for noncompliance.

VII. Bidding Schedule

Utah Department of Transportation

Bidder's Schedule

Bid Opening Date: 6/10/2003

Project Number: SP-0068(22)50

Project Name: SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Description: SAFETY/TRAFFIC OPERATIONS

Funding: STATE

Region: REGION 2

County: SALT LAKE

#	Item	Description	Quantity	Unit
10 - ROADWAY				
1	012850010	Mobilization	1	lump sum
2	013150010	Public Information Services	1	lump sum
3	015540005	Traffic Control	1	lump sum
4	01557000*	Maintenance of Traffic	1	lump sum
5	015710010	Check Dam (Straw or Hay Bale)	48	foot
6	015710050	Drop-Inlet Barriers (Straw or Hay Bale)	16	foot
7	015710060	Drop-Inlet Barriers (Stone)	1400	cubic foot
8	015720020	Dust Control and Watering	95	1000 gallons
9	018910020	Move Mailbox	5	each
10	018920010	Reconstruct Catch Basin	1	each
11	020560020	Granular Borrow	4549	ton
12	02082002P	Relocate Water Meter	6	each
13	02082003*	Relocate Fire Hydrant	3	each
14	02082004*	Relocate Sewer Cleanout	1	each
15	02221001D	Remove Building, Basement, and Foundation Parcel #2	1	parcel
16	02221002D	Remove Building, Basement, and Foundation Parcel #3	1	parcel
17	022210030	Remove Catch Basin	11	each
18	02221003D	Remove Building, Basement, and Foundation Parcel #4	1	parcel
19	022210080	Remove Fence	336	foot
20	022210095	Remove Pipe Culvert	676	foot
21	022220005	Remove Concrete Sidewalk	526	square yard
22	022220010	Remove Concrete Driveway	347	square yard
23	022220020	Remove Concrete Curb and Gutter	763	foot
24	02222002P	Remove Concrete Pavement	100	square yard
25	02222003P	Remove Raised Island	5457	square foot
26	02222004P	Remove Asphalt Pavement	631	square yard
27	02222005*	Remove Concrete Ditch	120	foot
28	022310010	Clearing and Grubbing	1	lump sum
29	02316002P	Roadway Excavation (Plan Quantity)	3676	cubic yard
30	02610041P	18 inch Reinforced Concrete Pipe Culvert, Class B	502	foot
31	02610042P	36 inch Reinforced Concrete Pipe Culvert, Class B	73	foot
32	026130030	Culvert End Sections 18 inch	1	each
33	026350040	Rectangular Grate And Frame (Bicycle Safe Grating) Std Dwg GF 3	10	each
34	026350045	Solid Cover and Frame , Std Dwg GF 5	1	each
35	027210070	Untreated Base Course 3/4 inch or 1 inch Max	1516	ton
36	027410060	HMA - 3/4 inch	1251	ton
37	027480010	Liquid Asphalt MC-70 or MC-250	3	ton
38	027480030	Emulsified Asphalt SS-1	2	ton
39	027520030	Portland Cement Concrete Pavement 11 inch Thick	1550	square yard
40	027710020	Concrete Curb Type M2	1366	foot
41	027710025	Concrete Curb and Gutter Type B1	1565	foot
42	027710045	Concrete Driveway Flared, 7 inch Thick	2170	square foot
43	027710065	Pedestrian Access Ramp Type B	218	square foot
44	027710080	Pedestrian Access Ramp Type E	670	square foot

Note: Item numbers ending with "" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

Utah Department of Transportation

Bidder's Schedule

Bid Opening Date: 6/10/2003

Project Number: SP-0068(22)50

Project Name: SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Description: SAFETY/TRAFFIC OPERATIONS

Funding: STATE

Region: REGION 2

County: SALT LAKE

#	Item	Description	Quantity	Unit
10 - ROADWAY				
45	027710100	Plowable End Section	1	each
46	027760010	Concrete Sidewalk	17254	square foot
47	027760020	Concrete Median Filler	495	square foot
48	02776007*	Remove and Replace Steps	2	each
49	027860010	Open Graded Surface Course	165	ton
50	027860050	Asphalt Cement PG 64-28	10	ton
51	028210042	Chain Link Fence, Type I with Barb Wire Arm	336	foot
52	028210084	Chain Link Gate, H= 6 ft X W= 12 ft	2	each
53	02821008P	Chain Link Gate, H= 6 ft X W= 22 ft	2	each
54	028420010	Delineator Type I	10	each
55	028960020	Right-of-Way Markers	1	each
56	029120010	Contractor Furnished Topsoil	3200	square yard
57	029220040	Broadcast Seed	23	1000 square fee
58	029220060	Turf Sod	9000	square foot
59	03310002P	Concrete- Small Structure	16	cubic yard

40 - SIGNING

60	027650020	Pavement Message Paint	77	each
61	027650030	Remove Pavement Markings	5928	foot
62	027650040	Remove Pavement Markings	21	each
63	027650050	Pavement Marking Paint	34	gallon
64	027680030	4 inch Pavement Marking Epoxy - White Type 1	275	foot
65	027680035	8 inch Pavement Marking Epoxy - White Type 1	2045	foot
66	027680040	4 inch Pavement Marking Epoxy - Yellow Type 1	1230	foot
67	027680070	Pavement Message (Epoxy), Type 1	12	each
68	028910005	Remove Sign	20	each
69	028910010	Relocation of Sign	5	each
70	028910075	Auxiliary Sign Type A-2	18	square foot
71	028910095	Sign Type A-2, 24 inch X 12 inch	1	each
72	028910105	Sign Type A-2, 24 inch X 30 inch	1	each
73	028910115	Sign Type A-2, 30 inch X 30 inch	3	each
74	02891011P	Sign Type A-2, 48 inch X 30 inch	2	each
75	028910120	Sign Type A-2, 36 inch X 36 inch	4	each
76	028910125	Sign Type A-2, 48 inch X 48 inch	1	each
77	02891012P	Sign type A-2, 12 inch X 36 inch	1	each
78	02891018P	Sign Type P2	88	square foot

50 - SIGNALS

79	028920015	Signal Power Source	2	each
80	02892001D	Traffic Signal System SR68 & 6200 SOUTH	1	lump sum

Note: Item numbers ending with "" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

Utah Department of Transportation

Bidder's Schedule

Bid Opening Date: 6/10/2003

Project Number: SP-0068(22)50

Project Name: SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Description: SAFETY/TRAFFIC OPERATIONS

Funding: STATE

Region: REGION 2

County: SALT LAKE

#	Item	Description	Quantity	Unit
50 - SIGNALS				
81	028920020	Installation of State Furnished Material	1	lump sum
82	028920025	Installation of State Furnished Mast Arm Mounted Sign	5	each
83	02892002D	Traffic Signal System SR68 & I-215 E.B. OFF RAMP	1	lump sum
84	02892005*	Remove and Salvage Existing Equipment	1	lump sum
60 - LIGHTING				
85	16525001D	Highway Lighting System SR68 & 6200 SOUTH	1	lump sum
86	16525002D	Highway Lighting System SR68 & I-215 E.B. OFF RAMP	1	lump sum
87	16525003D	Highway Lighting System SR68 & I-215 STRUCTURES	1	lump sum
70 - ATMS				
88	135530010	ATMS Conduit	1804	foot
89	135540010	Polymer Concrete Junction Box	5	each
90	13556001P	Installation of Closed Circuit Television (CCTV) Assembly System	1	lump sum
91	13594001P	Fiber Optic Communication System	1	lump sum

Note: Item numbers ending with "" or "P" identify a change to the Standard Specification, Supplemental Specifications or Measurement and payment. Read all related documents carefully.

VIII. Measurement and Payment

The Department will measure and pay for each bid item as detailed in this section.
Payment is contingent upon acceptance by the Department.

Items are listed by Specification and in tables as follows:

Item #	Bid item number	Bid Item Name	Unit of measurement and payment
Additional information goes here.			

1	012850010	Mobilization	Lump Sum
	Payment	Amount Paid	When Paid
	First	The lesser of 25% of mobilization or 2.5% of contract	With first estimate
	Second	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 5% of contract
	Third	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 10% of contract
	Fourth	The lesser of 25% of mobilization or 2.5% of contract	With estimate following completion of 20% of contract
	Final	Amount bid in excess of 10% of contract price.	Project Acceptance-Final

2	013150010	Public Information Services	Lump Sum
	Payment	Amount Paid	When Paid
	One	25% of bid item amount	With first estimate
		Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

3	015540005	Traffic Control	Lump Sum
	Payment	Amount Paid	When Paid
	One	25% of the bid item amount	With first estimate
		Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

4	01557000S	Maintenance of Traffic	Lump Sum
	Payment	Amount Paid	When Paid
	One	25% of the bid item amount	With first estimate
		Remaining portion of bid item paid as a percentage of the contract completed	With each estimate

5	015710010	Check Dam (Straw or Hay Bale)	Feet
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6	015710050	Drop-Inlet Barriers (Straw or Hay Bale)	Feet
In place, along the center line of bales			

7	015710060	Drop-Inlet Barriers (Stone)	Cubic Feet
In place			

8	015720020	Dust Control and Watering	1000 Gallon
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9	018910020	Move Mailbox	Each
In place, Department will not pay for temporary mailbox installation or removal.			

10	018920010	Reconstruct Catch Basin	Each
In place. Payment covers materials, equipment and labor required to complete the work including, coring and grouting to providing a water tight seal to any new or existing connections to storm drain pipe.			

11	020560020	Granular Borrow	Ton
Refer to Section 01280 "Measurement."			

12	02082002P	Relocate Water Meter	Each
In place. Payment covers materials, equipment and labor required to complete a fully functional relocated water meter including: excavation, backfilling, compaction, and all other incidental required.			

13	02082003*	Relocate Fire Hydrant	Each
In place. Payment covers, materials equipment and labor required to raise and/or relocate existing fire hydrants, including: excavation, backfilling, compaction, removal of concrete, new concrete and all other incidentals required.			

14	02082004*	Relocate Sewer Cleanout	Each
In place. Payment covers, materials equipment and labor required to relocate existing sewer cleanouts, including: excavation, backfilling, compaction and all other incidentals required.			

15	02221001D	Remove Building, Basement, and Foundation, Parcel #2	Parcel
<p>A. Including any remaining out-buildings and incidental obstructions.</p> <p>B. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation" or "Borrow." When no appropriate material item is included in the proposal, consider that item incidental to the work.</p> <p>Price Adjustments:</p> <ol style="list-style-type: none"> 1. The Department is not responsible for any vandalism or theft that occurs to the building or its contents, which reduces the value of the salvage or increases the cost of removal after the award of the Contract. 2. Department will pay for removal of obstructions not visible or not designated on plans or special provision as extra work. 3. Department will include obstructions shown on the plans for removal but not having a pay item in other items of work. 4. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation," or "Borrow." If no appropriate material item is included in the proposal, it will be considered incidental to the work. 			

16	02221002D	Remove Building, Basement, and Foundation, Parcel #3	Parcel
<p>A. Including any remaining out-buildings and incidental obstructions.</p> <p>B. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation" or "Borrow." When no appropriate material item is included in the proposal, consider that item incidental to the work.</p> <p>Price Adjustments:</p> <ol style="list-style-type: none"> 1. The Department is not responsible for any vandalism or theft that occurs to the building or its contents, which reduces the value of the salvage or increases the cost of removal after the award of the Contract. 2. Department will pay for removal of obstructions not visible or not designated on plans or special provision as extra work. 3. Department will include obstructions shown on the plans for removal but not having a pay item in other items of work. 4. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation," or "Borrow." If no appropriate material item is included in the proposal, it will be considered incidental to the work. 			

17	022210030	Remove Catch Basin	Each
Removed			

18	02221003D	Remove Building, Basement, and Foundation, Parcel #4	Parcel
<p>A. Including any remaining out-buildings and incidental obstructions.</p> <p>B. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation" or "Borrow." When no appropriate material item is included in the proposal, consider that item incidental to the work.</p> <p>Price Adjustments:</p> <ol style="list-style-type: none"> 1. The Department is not responsible for any vandalism or theft that occurs to the building or its contents which reduces the value of the salvage or increases the cost of removal after the award of the Contract. 2. Department will pay for removal of obstructions not visible or not designated on plans or special provision as extra work. 3. Department will include obstructions shown on the plans for removal but not having a pay item in other items of work. 4. Department will pay separately for material used for backfilling basements and other depressions as "Roadway Excavation," or "Borrow." If no appropriate material item is included in the proposal, it will be considered incidental to the work. 			

19	022210080	Remove Fence	Feet
Removed			

20	022210095	Remove Pipe Culvert	Feet
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21	022220005	Remove Concrete Sidewalk	Square Yard
Area of steps will be based on the area of the horizontal projection.			

22	022220010	Remove Concrete Driveway	Square Yard
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23	022220020	Remove Concrete Curb and Gutter	Feet
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24	02222002P	Remove Concrete Pavement	Square Yard
<p>Department will not pay for Concrete Pavement Sawing under a separate item. Payment will include all equipment, materials and labor required to saw cut the existing pavement full depth to the top of the base course.</p> <p>Regardless of the depth encountered.</p> <p>A. Do not measure discontinued roads within the limits of the new roadbed or roads that are disturbed in performing other items of work.</p> <p>B. Department will pay for material placed to cover pavements or fill depressions under "Roadway Excavation," or "Borrow."</p> <p>C. Quantity measured and paid is excluded from measurement and payment under "Roadway Excavation".</p> <p>D. Department will pay for concrete curb and concrete curb and gutter integral to the concrete pavement to be removed under "Remove Concrete Pavement."</p> <p>E. Concrete Pavement Sawing will not be paid for under a separate item and is incidental to this item.</p>			

25	02222003P	Remove Raised Island	Square Feet
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26	02222004P	Remove Asphalt Pavement	Square Yard
<p>Department will not pay for Asphalt Pavement Sawing under a separate item. Payment will include all equipment, materials and labor required to saw cut the existing pavement full depth to the top of the base course.</p> <p>Regardless of the depth or number of courses encountered.</p> <p>A. Do not measure discontinued roads within the limits of the new roadbed or roads that are disturbed in performing other items of work.</p> <p>B. Department will pay for material placed to cover pavements or fill depressions under "Roadway Excavation," or "Borrow."</p> <p>C. Quantity measured and paid is excluded from measurement and payment under "Roadway Excavation".</p> <p>D. Department will pay for concrete curb and concrete curb and gutter integral to the concrete pavement to be removed under "Remove Concrete Pavement."</p>			

27	02222005*	Remove Concrete Ditch	Feet
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28	022310010	Clearing and Grubbing	Lump Sum
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29	02316002P	Roadway Excavation (Plan Quantity)	Cubic Yard
<p>A. Plan quantity is based on excavation of 7 inches of pavement and 25 inches of untreated base course/granular borrow. Pavement volumes are included in this quantity.</p> <p>B. Department authorizes cross sections or modifications including excavation below subgrade, unstable slopes, unpreventable slides and terracing.</p> <p>C. Department will not measure or pay for excavation in excess of that authorized.</p> <p>D. The Department pays for re-handing or additional haul when it is directed in writing as "Extra Work."</p>			

30	02610041P	18 inch Reinforced Concrete Pipe Culvert, Class B	Feet
Measured parallel to the center line from barrel end to barrel end, in place. Payment includes core drilling and grouting to provide a water tight seal at any connection to existing manholes and catch basins.			

31	02610042P	36 inch Reinforced Concrete Pipe Culvert, Class B	Feet
Measured parallel to the center line from barrel end to barrel end, in place. Payment includes core drilling and grouting to provide a water tight seal at any connection to existing manholes and catch basins.			

32	026130030	Culvert End Sections 18 inch	Each
In place			

33	026350040	Rectangular Grate and Frame, (Bicycle Safe Grating), Std Dwg GF 3	Each
In place			

34	026350045	Solid Cover and Frame, Std Dwg GF 5	Each
In place			

35	027210070	Untreated Base Course 3/4 inch or 1 inch Max	Ton
In place			

36	027410060	HMA - 3/4 inch	Ton
Includes aggregates, asphalt binder, hydrated lime, other additives, etc. The Department will not pay separately for asphalt binder, hydrated lime, additives, etc.			

37	027480010	Liquid Asphalt MC-70 or MC-250	Ton
Do not measure water added in excess of the specified amount in Standard Specification 02745.			

38	027480030	Emulsified Asphalt SS-1	Ton
Do not measure water added in excess of the specified amount in Standard Specification 02745.			

39	027520030	Portland Cement Concrete Pavement 11 inch Thick	Square Yard
<p>In place, measured width not to exceed plan width.</p> <p>Payment:</p> <p>A. Department will assess price adjustments for strength, thickness, and surface smoothness separately on the contract bid price.</p> <p>B. Department will use Table 02752-1 to determine price adjustments for concrete compressive strength.</p> <ol style="list-style-type: none"> 1. The price adjustment will apply to the test lot represented by the strength test. 2. The Engineer will evaluate all concrete with a compressive strength of more than 400 Psi below specification to determine capability of the material to maintain the integrity of the structure for payment. This concrete may be accepted at 50 percent pay factor or required to be replaced. <p>Price reductions for deficient thickness:</p> <p>A. Over new surfaces: Table 02752-2.</p> <p>B. Over existing surfaces: Table 02752-3.</p> <p>C. The Engineer may accept pavement deficient by more than 3/4 inch at 50 percent pay or require removal and replacement.</p> <p>D. Make all corrections, including removal and replacement at no additional cost to the Department.</p> <p>Surface Smoothness Bonus</p> <p>A. The Department will not pay a bonus:</p> <ol style="list-style-type: none"> 1. For any pavement in a day's production in which there is grinding in over three locations, or where the area ground exceeds 300 ft² per traffic lane. Required hand placement area will not be included in the ground area calculations. 2. On Class III pavement, (refer to Table 3 in Section 01452, article 3.4, Testing Portland Cement Concrete Pavement). <p>B. The Department will pay a bonus for any mainline pavement sections of 0.1 mile with a Profile Index less than the required inches per mile if the above criteria are not exceeded. Refer to Section 01452 for smoothness requirements.</p> <p>A. Bonuses paid will be computed by the following formula:</p> $\text{\$0.015} \{ (\text{Required inches per mile}) - (\text{Profile Index}) \} =$ <p>Incentive per square yard (Including shoulder areas and hand placement areas) to a \\$1.00 maximum.</p> <p>Quantity adjustments</p> <p>A. Will be made when the following occurs:</p> <ol style="list-style-type: none"> 1. Pavement is placed over existing road surfaces. 2. Accepted batched volume (total batched material adjusted to design yield minus rejected or wasted material) of concrete either overruns or underruns the computed neat-line volume (plan width x plan thickness x length placed). <p>B. Make the quantity adjustment before any price adjustment for non-specification material.</p> <p>C. At the time of placement, the Contractor and Engineer must agree to the quantity of concrete wasted or rejected when transit mix trucks are used. The formula for overrun/underrun is:</p> $QA = 0.5 \left(\frac{V_a - V_n}{V_n} \right) Q_m$ <p>QA = Adjustment quantity in square yards</p> <p>V_a = Accepted Volume</p> <p>V_n = Neat-line Volume</p> <p>Q_m = Measured quantity in square yards</p>			

Table 02752-1 Pay Adjustments for Compressive Strength Based on 28 days	
Psi below 4,000	Pay Factor
1 to 100	0.95
101 to 200	0.90
201 to 300	0.85
301 to 400	0.80

Table 02752 - 2 Price Reductions for Deficient Thickness Over New Surfaces	
Deficient Thickness (in inches)	Pay Factor
0 to 1/8	1.00
1/8 to 1/4	0.90
1/4 to 1/2	0.75
1/2 to 3/4	0.60

Table 02752 - 3 Price Reductions for Deficient Thickness over Existing Surfaces	
Deviations Below Profile (in feet)	Pay Factor
0.0 to 0.02	1.00
0.02 to 0.04	.90
0.04 to 0.06	.60

40	027710020	Concrete Curb Type M2	Feet
Measured along the roadway face. Include excavation if Roadway Excavation is not a bid item.			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength:		Pay Factor:	
1 - 100		0.98	
101 - 200		0.94	
201 - 300		0.88	
301 - 400		0.80	
More than 400		0.50 or Engineer may reject	

41	027710025	Concrete Curb and Gutter Type B1	Feet
Measured along the roadway face. Include excavation if Roadway Excavation is not a bid item.			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength:		Pay Factor:	
1 - 100		0.98	
101 - 200		0.94	
201 - 300		0.88	
301 - 400		0.80	
More than 400		0.50 or Engineer may reject	

42	027710045	Concrete Driveway Flared, 7 inch Thick	Square Feet
Include Radius and Flares.			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength:		Pay Factor:	
1 - 100		0.98	
101 - 200		0.94	
201 - 300		0.88	
301 - 400		0.80	
More than 400		0.50 or Engineer may reject	

43	027710065	Pedestrian Access Ramp Type B	Square Feet
In place			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength: Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

44	027710080	Pedestrian Access Ramp Type E	Square Feet
In place			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength: Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

45	027710100	Plowable End Section	Each
In place			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength:			
Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

46	027760010	Concrete Sidewalk	Square Feet
In place, include excavation if Roadway Excavation is not a bid item.			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength: Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

47	027760020	Concrete Median Filler	Square Feet
In place			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength: Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

48	02776007*	Remove and Replace Steps	Each
Includes all workmanship and materials to remove and replace steps as shown on the plans, including concrete, reinforcement, etc.			
In place			
Price Adjustments for Strength			
A. When concrete is below specified strength:			
1. Department may accept item at a reduced price			
2. The pay factor will be applied to the portion of the item, which is represented by the strength tests that fall below specified strength.			
3. Department will calculate the pay factor as follows:			
Psi below specified strength: Pay Factor:			
1 - 100 0.98			
101 - 200 0.94			
201 - 300 0.88			
301 - 400 0.80			
More than 400 0.50 or Engineer may reject			

49	027860010	Open Graded Surface Course	Ton
Measurement: In place A. Include aggregates and all additives including hydrated lime. Provide additional measurements for Asphalt Binder.			

50	027860050	Asphalt Cement PG 64-28	Ton
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51	028210042	Chain Link Fence, Type I with Barb Wire Arm	Feet
In place Measured parallel to the ground along the fence including line posts, less openings. Concrete not required for post installation, except for gates.			

52	028210084	Chain Link Gate, H=6 ft W=12 ft	Each
In place A. Double gates will be counted as two gates. B. Include barbed wire arms on gates.			

53	02821008P	Chain Link Gate, H=6 ft W=22 ft	Each
In place A. Double gates will be counted as two gates. B. Include barbed wire arms on gates.			

54	028420010	Delineator Type I	Each
In place			

55	028960020	Right-of-Way Markers	Each
In place			

56	029120010	Contractor Furnished Topsoil	Square Yard
In place			

57	029220040	Broadcast Seed	1000 Square Feet
In place			

58	029220060	Turf Sod	Square Feet
In place			

59	03310002P	Concrete - Small Structure	Cubic Yard
<p>Measurement:</p> <ul style="list-style-type: none"> A. When the contract provides measurement per cubic yard, measure quantities by the dimensions shown. B. Use the prismoidal formula when the method of average end areas is not sufficiently accurate. C. Do not measure concrete required to fill over breakage of excavation for footings, walls, or slabs. D. Department will not deduct for volume occupied by pipes (other than culverts), reinforcing steel, piles, metal grillage, anchors, conduits, or weep holes. <p>Payment:</p> <ul style="list-style-type: none"> A. Department will make no separate payment for Reinforcing steel for structures. B. Department will pay separately for concrete placed in individual structures containing less than 8 yd³ at the bid price per cubic yard for Concrete, Small Structure. C. Department will make no separate payment for excavation for structures. D. Department will calculate the pay factor as follows: <ul style="list-style-type: none"> Psi below specified strength: Pay Factor: 1 - 100 0.98 101 - 200 0.94 201 - 300 0.88 301 - 400 0.80 More than 400 0.50 or Engineer may reject 			

60	027650020	Pavement Message Paint	Each
In place, measurement - Painted Pavement Messages:			
A. Letter = one message.			
B. Arrow = one message.			
C. Multi-headed arrow = one message per arrow.			
D. School crossbars = one message per 24 inch x 10 ft bar.			
E. Crosswalk = two message per lane and two messages per shoulder.			
F. Stop Bar = one message per lane and one message per shoulder.			
G. Railroad crossing markings = seven messages per lane.			
1. >R= = one message each (two required).			
2. >X= = two messages.			
3. Transverse Bar = one message each (two required).			
4. Stop Bar = one message.			
Payment:			
A. The Department will not pay for removal of unauthorized, smeared, or damaged markings.			
B. Price reduction for paint application rate:			
Rate		Pay Factor	
At the specified rate		1.0	
1-10 percent below the specified rate		0.75	
11-15 percent below the specified rate		0.50	
More than 15 percent below the specified rate		May be accepted at 0.40 percent or repainted.	
		required to be	

61	027650030	Remove Pavement Markings	Feet
Measurement for removing pavement markings: Measure per foot each line removed.			

62	027650040	Remove Pavement Markings	Each
Measurement for removing pavement markers: 1. Measure each letter or single arrow as one pavement message. 2. Measure two-headed arrows as two pavement messages.			

63	027650050	Pavement Marking Paint	Gallon
In place, Payment:			
A. The Department will not pay for removal of unauthorized, smeared, or damaged markings.			
B. Price reduction for paint application rate:			
Rate		Pay Factor	
At the specified rate		1.0	
1-10 percent below the specified rate		0.75	
11-15 percent below the specified rate		0.50	
More than 15 percent below the specified rate		May be accepted at 0.40 percent or repainted.	required to be repainted.

64	027680050	4 inch Pavement Marking Epoxy - White, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the skip line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			

65	027680055	8 inch Pavement Marking Epoxy - White, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the skip line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			

66	027680040	4 inch Pavement Marking Epoxy - Yellow, Type I	Feet
Measurement - Painted Pavement Messages: A. Do not measure the gap in the skip line. B. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			

67	027680070	Pavement Message (Epoxy), Type I	Each
Measurement - Painted Pavement Messages: A. Letter = one message. B. Arrow = one message. C. Multi-headed arrow = one message per arrow. D. School crossbars = one message per 24 inch x 10 ft bar. E. Crosswalk = two message per lane and two messages per shoulder. F. Stop Bar = one message per lane and one message per shoulder. G. Railroad crossing markings = seven messages per lane. 1. >R= = one message each (two required). 2. >X= = two messages. 3. Transverse Bar = one message each (two required). 4. Stop Bar = one message. H. Include all costs for the Manufacturer's Service Representative and other technical assistance in the contract unit price.			

68	028910005	Remove Sign	Each
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69	028910010	Relocation of Sign	Each
In place, includes removal and disposal of existing concrete sign base.			

70	028910075	Auxiliary Sign Type A-2	Square Feet
In place			

71	028910095	Sign Type A-2, 24 inch x 12 inch	Each
In place			

72	028910105	Sign Type A-2, 24 inch X 30 inch	Each
In place			

73	028910115	Sign Type A-2, 30 inch X 30 inch	Each
In place			

74	02891011P	Sign Type A-2, 48 inch X 30 inch	Each
In place			

75	028910120	Sign Type A-2, 36 inch X 36 inch	Each
In place			

76	028910125	Sign Type A-2, 48 inch X 48 inch	Each
In place			

77	02891012P	Sign Type A-2, 12 inch X 36 inch	Each
In place			

78	02891018P	Sign Type P2	Square Feet
In place			

79	028920015	Signal Power Source	Each
Includes meter base, safety switch, rigid steel conduit, wire, weatherhead and conduit standoffs.			

80	02892001D	Traffic Signal System SR68 & 6200 South	Lump Sum
Includes all materials and workmanship to provide a complete and fully operational signal system.			

81	028920020	Installation of State Furnished Material	Lump Sum
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82	028920025	Installation of State Furnished Mast Arm Mounted Sign	Each
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83	02892002D	Traffic Signal System SR68 & I-215 E.B. Off Ramp	Lump Sum
Includes all materials and workmanship to provide a complete and fully operational signal system.			

84	02892005*	Remove and Salvage Existing Equipment	Lump Sum
Payment includes removal, transport, and backfill of all items specified in the plans and specifications.			

85	16525001D	Highway Lighting System SR68 & 6200 South	Lump Sum
Includes all materials and workmanship to provide a complete and fully operational highway lighting system.			

86	16525002D	Highway Lighting System SR68 & I-215 E.B. Off Ramp	Lump Sum
Includes all materials and workmanship to provide a complete and fully operational highway lighting system.			

87	16525003D	Highway Lighting System SR68 & I-215 Structures	Lump Sum
Includes all materials and workmanship to provide a complete and fully operational highway lighting system.			

88	135530010	ATMS Conduit	Feet
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89	135540010	Polymer Concrete Junction Box	Each
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90	13556001P	Installation of Closed Circuit Television (CCTV) Assembly System	Lump
Includes all materials and workmanship to provide a fully operational CCTV System. Includes the installation of the state furnished CCTV assembly.			

91	13594001P	Fiber Optic Communication System	Lump Sum
Includes all materials and workmanship to provide a fully operational Fiber Optic Communication System. Includes all material equipment, labor and workmanship required for the relocation of all Spread Spectrum Radio - Interconnect facilities.			

IX. PDBS Project Summary Report

Summary Report

Project: SP-0068(22)50

Version: 1

SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Detail	Alt Group	Alt #	Description	Qty	Unit
10 - ROADWAY	0	0			
Item Number	Description		Qty	Unit	
012850010	Mobilization		1	Lump	
013150010	Public Information Services		1	Lump	
015540005	Traffic Control		1	Lump	
01557000*	Maintenance of Traffic		1	Lump	
015710010	Check Dam (Straw or Hay Bale)		48	ft	
015710050	Drop-Inlet Barriers (Straw or Hay Bale)		16	ft	
015710060	Drop-Inlet Barriers (Stone)		1,400	cu ft	
015720020	Dust Control and Watering		95	1000 gal	
018910020	Move Mailbox		5	Each	
018920010	Reconstruct Catch Basin		1	Each	
020560020	Granular Borrow		4,549	Ton	
02082002P	Relocate Water Meter		6	Each	
02082003*	Relocate Fire Hydrant		3	Each	
02082004*	Relocate Sewer Cleanout		1	Each	
02221001D	Remove Building, Basement, and Foundation Parcel #2		1	Parcel	
02221002D	Remove Building, Basement, and Foundation Parcel #3		1	Parcel	
022210030	Remove Catch Basin		11	Each	
02221003D	Remove Building, Basement, and Foundation Parcel #4		1	Parcel	
022210080	Remove Fence		336	ft	
022210095	Remove Pipe Culvert		676	ft	
022220005	Remove Concrete Sidewalk		526	sq yd	
022220010	Remove Concrete Driveway		347	sq yd	
022220020	Remove Concrete Curb and Gutter		763	ft	
02222002P	Remove Concrete Pavement		100	sq yd	
02222003P	Remove Raised Island		5,457	sq ft	
02222004P	Remove Asphalt Pavement		631	sq yd	
02222005*	Remove Concrete Ditch		120	ft	
022310010	Clearing and Grubbing		1	Lump	
02316002P	Roadway Excavation (Plan Quantity)		3,676	cu yd	

Summary Report

Project: SP-0068(22)50

Version: 1

SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Detail	Alt Group	Alt #	Description		
10 - ROADWAY	0	0			
Item Number	Description	Qty	Unit		
02610041P	18 inch Reinforced Concrete Pipe Culvert, Class B	502	ft		
02610042P	36 inch Reinforced Concrete Pipe Culvert, Class B	73	ft		
026130030	Culvert End Sections 18 inch	1	Each		
026350040	Rectangular Grate And Frame (Bicycle Safe Grating) Std Dwg GF 3	10	Each		
026350045	Solid Cover and Frame , Std Dwg GF 5	1	Each		
027210070	Untreated Base Course 3/4 inch or 1 inch Max	1,516	Ton		
027410060	HMA - 3/4 inch	1,251	Ton		
027480010	Liquid Asphalt MC-70 or MC-250	3	Ton		
027480030	Emulsified Asphalt SS-1	2	Ton		
027520030	Portland Cement Concrete Pavement 11 inch Thick	1,550	sq yd		
027710020	Concrete Curb Type M2	1,366	ft		
027710025	Concrete Curb and Gutter Type B1	1,565	ft		
027710045	Concrete Driveway Flared, 7 inch Thick	2,170	sq ft		
027710065	Pedestrian Access Ramp Type B	218	sq ft		
027710080	Pedestrian Access Ramp Type E	670	sq ft		
027710100	Plowable End Section	1	Each		
027760010	Concrete Sidewalk	17,254	sq ft		
027760020	Concrete Median Filler	495	sq ft		
02776007*	Remove and Replace Steps	2	Each		
027860010	Open Graded Surface Course	165	Ton		
027860050	Asphalt Cement PG 64-28	10	Ton		
028210042	Chain Link Fence, Type I with Barb Wire Arm	336	ft		
028210084	Chain Link Gate, H= 6 ft X W= 12 ft	2	Each		
02821008P	Chain Link Gate, H= 6 ft X W= 22 ft	2	Each		
028420010	Delineator Type I	10	Each		
028960020	Right-of-Way Markers	1	Each		
029120010	Contractor Furnished Topsoil	3,200	sq yd		
029220040	Broadcast Seed	23	1000sqft		
029220060	Turf Sod	9,000	sq ft		

Summary Report

Project: SP-0068(22)50

Version: 1

SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Detail	Alt Group	Alt #	Description	Qty	Unit
10 - ROADWAY	0	0			
Item Number	Description				
03310002P	Concrete- Small Structure			16	cu yd

Detail	Alt Group	Alt #	Description	Qty	Unit
40 - SIGNING	0	0			
Item Number	Description				
027650020	Pavement Message Paint			77	Each
027650030	Remove Pavement Markings			5,928	ft
027650040	Remove Pavement Markings			21	Each
027650050	Pavement Marking Paint			34	gal
027680030	4 inch Pavement Marking Epoxy - White Type 1			275	ft
027680035	8 inch Pavement Marking Epoxy - White Type 1			2,045	ft
027680040	4 inch Pavement Marking Epoxy - Yellow Type 1			1,230	ft
027680070	Pavement Message (Epoxy), Type 1			12	Each
028910005	Remove Sign			20	Each
028910010	Relocation of Sign			5	Each
028910075	Auxiliary Sign Type A-2			18	sq ft
028910095	Sign Type A-2, 24 inch X 12 inch			1	Each
028910105	Sign Type A-2, 24 inch X 30 inch			1	Each
028910115	Sign Type A-2, 30 inch X 30 inch			3	Each
02891011P	Sign Type A-2, 48 inch X 30 inch			2	Each
028910120	Sign Type A-2, 36 inch X 36 inch			4	Each
028910125	Sign Type A-2, 48 inch X 48 inch			1	Each
02891012P	Sign type A-2, 12 inch X 36 inch			1	Each
02891018P	Sign Type P2			88	sq ft

Detail	Alt Group	Alt #	Description	Qty	Unit
50 - SIGNALS	0	0			
Item Number	Description				
028920015	Signal Power Source			2	Each
02892001D	Traffic Signal System SR68 & 6200 SOUTH			1	Lump
028920020	Installation of State Furnished Material			1	Lump
028920025	Installation of State Furnished Mast Arm Mounted Sign			5	Each

Summary Report

Project: SP-0068(22)50

Version: 1

SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

Detail	Alt Group	Alt #	Description		
50 - SIGNALS	0	0			
Item Number	Description		Qty	Unit	
02892002D	Traffic Signal System SR68 & I-215 E.B. OFF RAMP		1	Lump	
02892005*	Remove and Salvage Existing Equipment		1	Lump	

Detail	Alt Group	Alt #	Description		
60 - LIGHTING	0	0			
Item Number	Description		Qty	Unit	
16525001D	Highway Lighting System SR68 & 6200 SOUTH		1	Lump	
16525002D	Highway Lighting System SR68 & I-215 E.B. OFF RAMP		1	Lump	
16525003D	Highway Lighting System SR68 & I-215 STRUCTURES		1	Lump	

Detail	Alt Group	Alt #	Description		
70 - ATMS	0	0			
Item Number	Description		Qty	Unit	
135530010	ATMS Conduit		1,804	ft	
135540010	Polymer Concrete Junction Box		5	Each	
13556001P	Installation of Closed Circuit Television (CCTV) Assembly System		1	Lump	
13594001P	Fiber Optic Communication System		1	Lump	

X. PDBS Detailed Stationing Summaries Report

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SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
015710010	Check Dam (Straw or Hay Bale)					48	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
PP-7	190+00	34 LT			12.0		
PP-8	192+00	31 LT			12.0		
PP-8	195+00	31 LT			12.0		
PP-9	198+00	35 LT			12.0		
					48.0		
015710050	Drop-Inlet Barriers (Straw or Hay Bale)					16	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-4	53+37.41	97.46' LT			16.0		
					16.0		
015710060	Drop-Inlet Barriers (Stone)					1,400	cu ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-1	128+69.97	27.57 LT			140.0		
DR-1	37+05.55	63.82 LT			140.0		
DR-2	39+32.91	56.00 LT			140.0		
DR-2	40+38.74	56.00 LT			140.0		
DR-2	42+52.50	56.00 LT			140.0		
DR-2	44+02.48	56.00 LT			140.0		
DR-3	47+45.60	56.00 LT			140.0		
DR-3	47+98.59	80.23 LT			140.0		
DR-3	48+23.55	80.39 LT			140.0		
DR-4	50+90.87	56.00 LT			140.0		
					1,400.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
018910020	Move Mailbox					5	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-2	39+89.60	44.63 LT	39+90.00	59.00 LT	1.0		
RD-2	40+38.52	44.61 LT	40+38.52	59.00 LT	1.0		
RD-2	41+05.24	43.84 LT	41+10.15	59.00 LT	1.0		
RD-2	41+93.54	44.19 LT	41+93.54	59.00 LT	1.0		
RD-2	43+93.42	44.65 LT	43+97.25	59.00 LT	1.0		
					5.0		
018920010	Reconstruct Catch Basin					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-3	47+96.99	75.33 LT			1.0		
					1.0		
020560020	Granular Borrow					4,549	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					2,993.76	Redwood Road	
TS-2					1,555.2	Off-Ramp	
					4,548.96		
02082002P	Relocate Water Meter					6	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
UT-1	37+04.51	69.58 LT			1.0		
UT-2	40+63.49	44.54 LT			1.0		
UT-2	41+12.37	45.20 LT			1.0		
UT-2	41+92.06	44.58 LT			1.0		
UT-2	42+88.71	44.39 LT			1.0		
UT-3	46+45.01	45.23 LT			1.0		
					6.0		

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Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
02082003*	Relocate Fire Hydrant					3	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
UT-1	39+10.40	51.64 LT	39+10.00	67.00 LT	1.0		
UT-2	43+91.27	44.56 LT	44+10.00	66.00 LT	1.0		
UT-3	47+74.02	45.93 LT	47+75.00	70.00 LT	1.0		
					3.0		
02082004*	Relocate Sewer Cleanout					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
UT-2					1.0		
					1.0		
022210030	Remove Catch Basin					11	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	128+85.94	28.54 LT			1.0		
RD-1	37+02.19	41.39 LT			1.0		
RD-1	39+32.89	41.99 LT			1.0		
RD-2	39+53.68	50.37 LT			1.0		
RD-2	39+77.67	50.54 LT			1.0		
RD-2	40+38.72	41.23 LT			1.0		
RD-2	44+02.46	41.90' LT			1.0		
RD-3	47+45.08	41.03 LT			1.0		
RD-3	47+96.94	73.65 LT			1.0		
RD-3	48+24.40	73.26 LT			1.0		
RD-4	199+13.89	16.06 LT			1.0		
					11.0		
022210080	Remove Fence					336	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-3	43+91.51	65.00 LT	47+86.18	84.98 LT	336.0		
					336.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
022210095	Remove Pipe Culvert				676	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-1	128+69.97	27.57 LT	128+85.94	28.54 LT	23.97	
RD-1	128+85.94	28.54 LT	37+02.19	41.39 LT	76.8	
RD-1	37+02.19	41.39 LT	40+38.73	42.00 LT	339.78	
RD-1	39+54.93	50.37 LT	39+77.67	50.54 LT	21.5	
RD-1	39+77.67	50.54 LT	39+78.27	42.85 LT	5.6	
RD-2	39+54.93	50.37 LT	39+77.67	50.54 LT	22.74	
RD-2	39+77.67	50.54 LT	39+78.27	42.85 LT	5.6	
RD-2	40+38.72	41.23 LT			8.0	
RD-2	44+02.46	41.9 LT			8.0	
RD-3	47+45.08	41.0 LT			8.0	
RD-3	47+47.16	41.03 LT	48+06.91	41.43 LT	59.75	
RD-3	47+96.94	73.65 LT	48+05.75	67.78 LT	10.59	
RD-3	48+09.25	67.11 LT	48+24.40	73.26 LT	16.35	
RD-4	198+86.09	66.73 RT	199+13.89	16.06 RT	57.8	
RD-4	50+86.98	45.64 LT	50+87.13	43.43 LT	2.22	
RD-4	50+88.02	48.76 LT	50+91.55	56.91 LT	8.88	
					675.58	
022220005	Remove Concrete Sidewalk				526	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-1	128+72.23	30.18 LT	37+41.08	63.50 LT	115.0	Around corner
RD-1	37+41.08	63.50 LT	39+52.27	49.29 LT	137.67	
RD-2	39+76.45	49.37 LT	40+02.96	49.51 LT	17.67	
RD-2	40+12.45	54.49 LT	40+59.22	54.84 LT	31.18	
RD-2	41+00.97	50.06 LT	41+49.88	50.07 LT	32.61	
RD-2	41+89.07	50.06 LT	43+72.22	50.30 LT	131.19	
RD-3	43+90.51	49.96 LT	44+00.00	49.97 LT	4.18	
RD-4	44+00.00	49.97 LT	45+28.22	50.15 LT	56.43	
					525.93	

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
022220010	Remove Concrete Driveway					347	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-2	39+64.72	LT			54.8		
RD-2	40+07.75	LT			24.0		
RD-2	40+72.00	LT			42.0		
RD-2	40+90.00	LT			53.71		
RD-2	41+55.00	LT			18.44		
RD-2	41+75.00	LT			58.08		
RD-2	43+78.00	LT			71.78		
RD-3	45+44.10	LT			13.31		
RD-3	46+58.62	LT			10.73		
					346.85		
022220020	Remove Concrete Curb and Gutter					763	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	128+72.23	30.18 LT	37+40.10	57.50 LT	122.0	Around corner	
RD-1	37+40.10	57.50 LT	39+50.14	43.65 LT	210.04		
RD-2	39+78.43	43.63 LT	40+02.36	43.61 LT	23.93		
RD-2	40+16.13	43.64 LT	40+55.93	43.72 LT	39.8		
RD-2	41+00.75	43.73 LT	41+49.72	43.50 LT	48.97		
RD-2	41+88.94	43.47 LT	43+72.21	43.65 LT	183.27		
RD-2	43+90.29	43.52 LT	44+00.00	43.48 LT	9.71		
RD-3	44+00.00	43.48 LT	45+25.45	43.49 LT	125.45		
					763.17		
02222002P	Remove Concrete Pavement					100	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-4	197+64.30	20.00 RT	198+86.48	20.00 RT			
RD-4	198+86.48	20.00 RT	198+84.42	34.33 RT	100.0		
					100.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
02222003P	Remove Raised Island					5,457	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	129+23.98	17.37 LT	36+58.26	36.50 LT	650.0	FT2	
RD-1	36+58.26	36.8 LT	36+94.40	35.84 LT			
RD-4	51+29.75	45.21 LT	51+73.46	96.92 LT			
RD-4	51+73.46	96.92 LT	51+77.40	45.27 LT	1,303.3	FT2	
RD-5	55+37.17	4.48 LT	59+00.00	1.50 RT	2,290.94	FT2	
RD-6	59+00.00	1.50 RT	60+92.12	6.36 RT	1,213.06		
					5,457.3		
02222004P	Remove Asphalt Pavement					631	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-2	41+00.75	43.73 RT	41+49.73	46.16 RT		Roadway excavation (plan quantity) includes the aspha quantity	
RD-2	41+49.73	46.16 RT	41+89.15	46.08 RT		Roadway excavation (plan quantity) includes the aspha quantity	
RD-2	41+89.15	46.08 RT	42+05.52	43.71 RT	19.3	Roadway excavation (plan quantity) includes the aspha quantity	
RD-4	51+50.00	55.00 LT			611.67	Roadway excavation (plan quantity) includes the aspha quantity	
					630.97		
02222005*	Remove Concrete Ditch					120	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-2	42+49.76	53.0 LT	43+66.08	53.0 LT	116.32		
					116.32		
02316002P	Roadway Excavation (Plan Quantity)					3,676	cu yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					2,316.0	Redwood Road (207 CY FILL)	
TS-2					1,360.0	Off-Ramp (37 CY FILL)	
					3,676.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
02610041P	18 inch Reinforced Concrete Pipe Culvert, Class B					502	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-1	128+69.97	27.57 LT	37+05.55	63.82 LT	77.0		
DR-1	37+02.19	39.31 LT	37+04.41	61.79 LT	33.0		
DR-2	39+35.16	54.92 LT	40+36.49	54.84 LT	101.3		
DR-2	40+38.72	41.23 LT	40+38.74	52.50 LT	41.3		
DR-2	42+52.48	57.42 LT	42+52.50	76.34 LT	18.9		
DR-2	42+54.73	55.07 LT	44+00.23	54.96 LT	145.5		
DR-2	44+02.46	41.13 LT	44+02.47	52.50 LT	19.4		
DR-3	47+45.07	39.78 LT	47+45.59	52.50 LT	21.0		
DR-3	47+98.59	77.98 LT	48+05.23	68.52 LT	20.0		
DR-3	48+09.25	67.11 LT	48+23.55	78.14 LT	25.0		
					502.4		
02610042P	36 inch Reinforced Concrete Pipe Culvert, Class B					73	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-3	47+47.84	55.00 LT	48+06.91	41.43 LT	63.0		
DR-4	50+87.13	43.43 LT	50+90.87	52.50 LT	10.0		
					73.0		
026130030	Culvert End Sections 18 inch					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-2	42+52.5	76.34 LT			1.0		
					1.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
026350040	Rectangular Grate And Frame (Bicycle Safe Grating) Std Dwg GF 3					10	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-1	128+69.97	27.57 LT			1.0		
DR-1	37+05.55	63.82 LT			1.0		
DR-2	39+32.91	56.00 LT			1.0		
DR-2	40+38.74	56.00 LT			1.0		
DR-2	42+52.50	56.00 LT			1.0		
DR-2	44+02.48	56.00 LT			1.0		
DR-3	47+45.60	56.00 LT			1.0		
DR-3	47+98.59	80.23 LT			1.0		
DR-3	48+23.55	80.39 LT			1.0		
DR-4	50+90.87	56.00 LT			1.0		
					10.0		
026350045	Solid Cover and Frame , Std Dwg GF 5					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
DR-3	47+96.99	75.33 LT			1.0		
					1.0		
027210070	Untreated Base Course 3/4 inch or 1 inch Max					1,516	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					1,166.4	Redwood Road	
TS-2					349.92	Off-Ramp	
					1,516.32		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
027410060	HMA - 3/4 inch					1,251	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	26+58.26	26.81 LT	36+94.40	35.84 LT	15.61	Island Assumes 4in HMA	
RD-4	50+66.38	41.34 LT	52+03.93	43.59 LT	150.0		
RD-5	55+37.17	4.48 LT	59+00.00	1.50 RT	54.92	Assumes 4in HMA	
RD-6	59+00.00	1.50 RT	60+92.12	6.36 RT	29.08	Assumes 4in HMA	
TS-1					1,001.16	Redwood Road	
					1,250.77		
027480010	Liquid Asphalt MC-70 or MC-250					3	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					2.5		
					2.5		
027480030	Emulsified Asphalt SS-1					2	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					2.0		
					2.0		
027520030	Portland Cement Concrete Pavement 11 inch Thick					1,550	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-2					1,550.0	Off-Ramp	
					1,550.0		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
027710020	Concrete Curb Type M2				1,366	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-1	129+22.76	23.56 LT	129+47.11	47.09 LT		Island
RD-1	129+24.13	21.47 LT				R=2.5' Island
RD-1	129+48.62	18.82 LT	129+24.12	18.97 LT		Island
RD-1	129+49.15	45.64 LT				R=2.5' Island
RD-1	129+49.20	21.32 LT				R=2.5' Island
RD-1	129+51.65	45.65 LT	129+51.70	22.50 LT	107.9	Island
RD-4	52+62.92	7.10 RT	53+37.09	7.08 RT	148.34	Island - back to back
RD-5	55+37.17	4.48 LT	56+64.63	5.58 LT	254.92	Island - back to back
RD-5	56+64.63	5.58 LT	59+00.00	1.50 RT	470.74	Island - back to back
RD-6	59+00.00	1.50 RT	60+92.12	6.36 RT	384.24	Island - back to back
					1,366.14	
027710025	Concrete Curb and Gutter Type B1				1,565	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-1	128+72.23	30.18 LT	37+40.10	57.50 LT	110.9	around corner
RD-1	37+40.10	57.50 LT	39+50.00	57.5 LT	209.9	
RD-2	39+78.94	57.50 LT	39+83.96	57.50 LT	5.02	
RD-2	40+19.92	57.50 LT	40+56.94	57.50 LT	37.02	
RD-2	41+06.84	57.50 LT	41+42.45	57.50 LT	35.61	
RD-2	41+96.34	57.50 LT	43+61.52	57.50 LT	165.18	
RD-3	149+17.37	14.84 LT	51+08.21	57.50 LT	300.52	around corner
RD-3	43+93.03	57.50 LT	45+21.10	57.50 LT	128.07	
RD-3	45+67.09	57.50 LT	46+39.58	57.50 LT	72.49	
RD-3	46+77.66	57.50 LT	47+71.09	57.50 LT	93.43	
RD-3	47+71.09	57.50 LT	149+17.53	15.08 RT	43.18	around corner
RD-4	199+11.87	30.50 LT	52+35.02	60.80 LT	44.05	around corner
RD-4	51+08.21	57.50 LT	198+96.60	22.50 LT	76.0	around corner
RD-4	52+35.02	60.80 LT	54+76.15	58.19 LT	241.13	
					1,562.5	

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
027710045	Concrete Driveway Flared, 7 inch Thick					2,170	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-2	39+64.72	55.00 LT			297.85		
RD-2	40+07.51	55.00 LT			167.16		
RD-2	40+81.97	55.00 LT			394.0		
RD-2	41+69.40	55.00 LT			429.1		
RD-2	43+77.28	55.00 LT			231.78		
RD-3	45+44.10	55.00 LT			359.52		
RD-3	46+58.62	55.00 LT			289.64		
					2,169.05		
027710065	Pedestrian Access Ramp Type B					218	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	129+35.16	35.09 LT			72.6		
RD-1	129+40.99	17.62 LT			72.6		
RD-1	129+52.94	30.73 LT			72.6		
					217.8		
027710080	Pedestrian Access Ramp Type E					670	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	129+22.17	50.36 LT			82.62		
RD-3	47+89.12	64.46 LT			85.71		
RD-3	48+32.94	64.51 LT			88.22		
RD-4	51+42.89	70.79 LT			87.67		
RD-4	52+16.79	68.25 LT			92.4		
RD-5	54+64.90	61.32 LT			91.07		
RD-5	54+99.38	81.22 LT			137.91		
					665.6		

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10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
027710100	Plowable End Section					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-4	53+37.09	7.08 RT			1.0		
					1.0		
027760010	Concrete Sidewalk					17,254	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	128+72.23	30.18 LT	129+04.83	47.22 LT	44.58		
RD-1	129+04.83	47.22 LT	37+10.63	71.49 LT	36.27		
RD-1	37+10.63	71.49 LT	37+41.08	63.5 LT	9,387.0		
RD-1	37+41.08	63.50 LT	39+57.55	63.50 LT	1,298.8	6ft wide	
RD-2	39+76.90	63.5 LT	40+02.66	63.50 LT	154.6	6ft wide	
RD-2	40+12.83	63.50 LT	40+63.96	63.50 LT	276.0	6ft wide	
RD-2	40+99.85	63.50 LT	41+49.47	63.50 LT	265.0	6ft wide	
RD-2	41+89.34	63.50 LT	43+68.54	63.50 LT	1,044.0	6ft wide	
RD-3	149+17.42	19.75 LT	51+08.21	63.50 LT	429.8	around corner	
RD-3	43+86.03	63.50 LT	45+28.12	63.50 LT	852.5	6ft wide	
RD-3	45+60.10	63.50 LT	46+46.61	63.50 LT	519.1	6ft wide	
RD-3	46+70.66	63.50 LT	47+74.15	63.50 LT	620.9	6ft wide	
RD-3	47+74.15	63.50 LT	149+17.53	21.08 RT	242.5	around corner	
RD-4	199+11.87	36.50 LT	52+35.08	66.80 LT	280.4	around corner	
RD-4	51+08.21	63.50 LT	198+96.60	28.50 RT	516.2	around corner	
RD-4	52+35.08	66.80 LT	54+49.51	64.44 LT	1,286.6	6ft wide	
					17,254.25		
027760020	Concrete Median Filler					495	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	129+22.76	23.56 LT	129+47.11	47.09 LT		Island	
RD-1	129+48.62	18.82 LT	129+24.12	18.97 LT		Island	
RD-1	129+51.65	45.65 LT	129+51.70	22.50 LT	495.0	Island	
					495.0		

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SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
02776007*	Remove and Replace Steps					2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-1	38+11.81	LT			1.0		
RD-1	38+82.54	LT			1.0		
					2.0		
027860010	Open Graded Surface Course					165	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					165.24	Redwood Road	
					165.24		
027860050	Asphalt Cement PG 64-28					10	Ton
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
TS-1					10.24	Redwood Road	
					10.24		
028210042	Chain Link Fence, Type I with Barb Wire Arm					336	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-3	43+91.51	65.00 LT	45+21.00	65.00 LT	129.49		
RD-3	45+65.00	65.00 LT	46+46.98	65.00 LT	81.98		
RD-3	46+70.28	65.00 LT	47+86.18	84.98 LT	124.17		
					335.64		
028210084	Chain Link Gate, H= 6 ft X W= 12 ft					2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
RD-3	46+46.98	65.00 LT	46+70.28	65.00 LT	2.0		
					2.0		

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SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
02821008P	Chain Link Gate, H= 6 ft X W= 22 ft				2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-3	45+21.00	65.00 LT	45+65.00	65.00 LT	2.0	
					2.0	
028420010	Delineator Type I				10	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-4	197+00.00	32 LT			1.0	
SS-4	199+00.00	32 LT			1.0	
SS-7	189+50.00	30 LT			1.0	
SS-7	191+30.00	30 LT			1.0	
SS-8	193+10.00	31 LT			1.0	
SS-8	194+00.00	31 LT			1.0	
SS-8	194+90.00	31 LT			1.0	
SS-8	195+80.00	31 LT			1.0	
SS-8	196+70.00	31 LT			1.0	
SS-8	197+60.00	31 LT			1.0	
					10.0	
028960020	Right-of-Way Markers				1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-4	50+72.92	65.00 LT			1.0	
					1.0	
029120010	Contractor Furnished Topsoil				3,200	sq yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
TS-1,2					3,209.0	
					3,209.0	

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SR-68, REDWOOD ROAD; 6200 SOUTH TO I-215

10 - ROADWAY

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
029220040	Broadcast Seed				23	1000sqft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
TS-2					22.5	
					22.5	
029220060	Turf Sod				9,000	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
RD-1					3,500.0	Church
RD-2					2,475.0	
RD-3					2,475.0	
RD-4					550.0	
					9,000.0	
03310002P	Concrete- Small Structure				16	cu yd
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
DR-1	128+69.97	27.57 LT			1.49	192
DR-1	37+05.55	63.82 LT			1.43	192
DR-2	39+32.91	56.00 LT			1.29	184
DR-2	40+38.74	56.00 LT			1.29	184
DR-2	42+52.50	56.00 LT			1.71	225
DR-2	44+02.48	56.00 LT			1.71	225
DR-3	47+45.60	56.00 LT			1.55	192
DR-3	47+98.59	80.23 LT			1.49	192
DR-3	48+23.55	80.39 LT			1.49	192
DR-4	50+90.87	56.00 LT			2.08	262
					15.53	

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
027650020	Pavement Message Paint				77	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1					4.0	Stop Bar South
SS-1					12.0	West Crosswalk
SS-1					4.0	North Crosswalk
SS-1					16.0	South Crosswalk
SS-1					5.0	West Stop Bar
SS-1					2.0	North Stop Bar
SS-1	37+42.00				1.0	Rt. Arrow
SS-1	38+42.00				1.0	Rt. Arrow
SS-2	39+42.00				1.0	Rt. Arrow
SS-3					6.0	West Crosswalk
SS-3					2.0	West Stop Bar
SS-4					15.0	West Leg Crosswalk and Stop Bar
SS-4					8.0	North Stop Bar (24")
					77.0	
027650030	Remove Pavement Markings				5,928	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1					838.7	
SS-4					4,567.6	
SS-5					521.2	
					5,927.5	

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
027650040	Remove Pavement Markings				21	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1	37+36.43				1.0	Rt. Arrow
SS-1	37+84.19				1.0	Rt. Arrow
SS-1	38+02.55				4.0	ONLY
SS-1	38+60.78				4.0	ONLY
SS-1	38+68.67				1.0	Rt. Arrow
SS-5	56+61.78				1.0	Rt. Arrow
SS-5	59+17.76				4.0	ONLY
SS-6	60+04.60				1.0	Rt. Arrow
SS-6	60+70.27				4.0	ONLY
					21.0	
027650050	Pavement Marking Paint				34	gal
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1-5					0.0	4" Solid Yellow
SS-1-5					1.53	4" Skip White
SS-1-5					7.34	4" Solid White
SS-1-5					0.13	4" Solid Double Yellow
SS-1-5					0.1	4" Dotted Yellow
SS-1-5					6.13	8" Solid White
SS-4					0.88	8" Dotted White
SS-4					2.08	White Island
SS-5,6					15.42	Yellow Island
					33.61	
027680030	4 inch Pavement Marking Epoxy - White Type 1				275	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-4-8					275.0	
					275.0	

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
027680035	8 inch Pavement Marking Epoxy - White Type 1				2,045	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-4-8					2,045.0	
					2,045.0	
027680040	4 inch Pavement Marking Epoxy - Yellow Type 1				1,230	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-4-8					1,230.0	
					1,230.0	
027680070	Pavement Message (Epoxy), Type 1				12	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-7					6.0	Trun arrows
SS-8					6.0	Trun arrows
					12.0	

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
028910005	Remove Sign				20	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1	36+75.00	40 LT			1.0	Rt. Turn Only on Signal Pole
SS-1	36+84.00	40.65 LT			1.0	Yield to Pedestrians
SS-1	37+04.00	62.96 LT			1.0	Yield to Pedestrians
SS-1	37+50.00	54 LT			1.0	Rt. Lane Must Turn Right
SS-2	42+53.00	53 LT			1.0	No Parking on Power Pole
SS-2	42+53.00	53 LT			1.0	Rt. Lane Must Turn Right on Power Pole
SS-3	46+92.00	52 LT			1.0	No Parking
SS-3	47+69.00	64 LT			1.0	No Parking Anytime
SS-3	47+88.00	65.50 LT			1.0	Stop
SS-3	48+33.55	74.5 LT			1.0	Dead End
SS-3	49+08.00	45 LT			1.0	S-68
SS-4	198+89.00	40 RT			1.0	No Stop Required This Lane
SS-4	50+74.00	51 LT			1.0	No Parking Anytime
SS-4	52+04.69	47 LT			1.0	Do Not Enter
SS-4	52+28.00	52 LT			1.0	No Rt. Turn on Light Pole
SS-5	54+35.00	53 LT			1.0	I-215 East
SS-5	55+28.00	87 LT			1.0	Rt. Lane Must Turn Right
SS-5	56+91.00	81 LT			1.0	Rt. Lane Must Turn Right
SS-6					1.0	I-215 East on Structure
SS-6	60+87	53 LT			1.0	Right Lane Must Turn Right
					20.0	
028910010	Relocation of Sign				5	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-3	48+55.00	50.8 LT	48+55.00	65.00 LT	1.0	6020 S. Redwood Rd 1700 W.
SS-4	197+94.60	30.73 LT	198+58.00	36.00 LT	1.0	Do Not Enter
SS-4	198+50.00	43.50 RT	198+51.75	31.00 RT	1.0	Do Not Enter
SS-7	191+61.40	25.29 LT	191+60.00	35.00 LT	1.0	Camping Sign
SS-8	195+90.00	28.50 LT	195+89.60	35.00 LT	1.0	Wrong Way
					5.0	

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
028910075	Auxiliary Sign Type A-2					18	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SS-1	36+84.44	51.43 LT			2.9	OM-3C	
SS-1	36+84.44	51.43 LT			3.8	W16-7P	
SS-1	37+12.30	73.73 LT			3.8	W16-7pL	
SS-3	49+08.00	65.00 LT			4.0	M1-5	
SS-5	55+19.94	87.10 LT			3.8	W16-7pL	
					18.3		
028910095	Sign Type A-2, 24 inch X 12 inch					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SS-3	49+08.00	65 LT			1.0	M3-3 on Wood Post	
					1.0		
028910105	Sign Type A-2, 24 inch X 30 inch					1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SS-4	199+10.00	33.35 RT			1.0	R10-11a on Wood Post	
					1.0		
028910115	Sign Type A-2, 30 inch X 30 inch					3	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SS-2	40+22.45	65.00 LT			1.0	R3-7 on Wood Post	
SS-3	47+87.00	76.60 LT			1.0	R1-1 on Wood Post	
SS-3	48+33.55	82.50 LT			1.0	W14-1 on Wood Post	
					3.0		

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40 - SIGNING

Alt Group: 0 Alt #: 0

Item Number	Description				Use Qty	Unit
02891011P	Sign Type A-2, 48 inch X 30 inch				2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-7	188+80	30.00 LT			1.0	R3-8b on Wood Post
SS-7	188+80.00	24.00 RT			1.0	R3-8b on Wood Post
					2.0	
028910120	Sign Type A-2, 36 inch X 36 inch				4	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1	36+61.00	75.0 LT			1.0	W4-3 on Wood Post
SS-1	36+84.44	51.43 LT			1.0	W11-2 (RT) on Wood Post
SS-1	37+12.30	73.73 LT			1.0	W11-2 on Wood Post
SS-5	55+19.94	87.10 LT			1.0	W11-2 on Wood Post
					4.0	
028910125	Sign Type A-2, 48 inch X 48 inch				1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-3	44+97.45	65.83 LT			1.0	W4-1aL on Wood Post
					1.0	
02891012P	Sign type A-2, 12 inch X 36 inch				1	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-1	36+61.06	50.36 LT			1.0	OM-3R on Wood Post
					1.0	
02891018P	Sign Type P2				88	sq ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
SS-5	54+07.00	68.00 LT			36.0	I-215 East on Wood Post
SS-6	60+30.00	56.00 LT			36.0	I-215 East on Wood Post
SS-7	191+50.00	24.00 RT			16.0	Double Turn Arrows on Wood Post
					88.0	

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50 - SIGNALS

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
028920015	Signal Power Source					2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
SG-1A					1.0		
SG-1B					1.0		
					<hr/>		
					2.0		

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70 - ATMS

Alt Group: 0 Alt #: 0

Item Number	Description					Use Qty	Unit
135530010	ATMS Conduit					1,804	ft
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment	
AT-1-4					229.6	3" Conduit	
AT-1-4					1,574.52	1-D ATMS Conduit	
					1,804.12		

135540010 Polymer Concrete Junction Box 5 Each

Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
AT-1	37+35.00	66.25 LT			1.0	Type II
AT-2	42+77.75	66.00 LT			1.0	Type II
AT-3	48+49.85	68.00 LT			1.0	Type II
AT-4	50+70.16	68.00 LT			1.0	Type II
AT-4	52+38.90	86.00 LT			1.0	Type II
					5.0	

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90 - STATE FURNISHED

Alt Group: 0

Alt #: 0

Item Number	Description				Use Qty	Unit
13556002*	Closed Circuit Television Modem				2	Each
Line/Sheet	From Station	From Offset	To Station	To Offset	Qty	Comment
					#	One MLD1-R for the hub and one ML1D-T for the cabin
					0.0	

XI. Special Provisions

SPECIAL PROVISION
SP-0068(22)50

SECTION 00555M

PROSECUTION AND PROGRESS

Add the following to section 1.12, Limitation of Operations:

- D. Coordinate all traffic control and work with the current I-215 widening project. Contact Brandon Squire at 887-3405
- E. ATMS:
 - 1. All ATMS work may be performed during nighttime operations. This allows for temporary nighttime shutdown of lanes.
 - 2. Restore any disturbance to the service of the existing fiber optic cable within twenty-four hours. UDOT will penalize the Contractor \$1000 per hour for every hour beyond the twenty-four that the existing fiber optic cable is not in service. The Engineer will deduct this penalty from payments due to the Contractor.
 - 3. Per the AT plans, restore fiber optic connections at 6200 South and the Off-Ramp within 48 hours of disruption. This occurs during the permanent relocation. UDOT will penalize the Contractor \$1000 per hour for every hour beyond the 48 that the relocated fiber optic cable is not in service.
 - 4. The Contractor will pay for damage done during the relocating of the systems.
- F. Maintain a minimum of three lanes of traffic on SB Redwood Road between the hours of 4 PM and 7PM, Monday through Friday and two lanes of traffic during all other hours.
- G. Maintain a minimum of three lanes of traffic on NB Redwood Road between the hours of 7 AM and 9AM, Monday through Friday and two lanes of traffic during all other hours.
- H. Maintain the existing number of lanes on the I-215 EB Off-Ramp during all hours. One-lane closures will be allowed when installing the system loops on the ramp except during the hours of 4 PM and 7PM, Monday through Friday.

- I. The structure on Parcels #4 will be burned under a simulation control fire by Salt Lake County. The county will perform the burn and have the burnt material cleaned up by May 30, 2003. The contractor will be responsible for performing the remainder of the work as outlined in Standard Specification 02221, Remove Structure and Obstruction.

SPECIAL PROVISION

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SECTION 00727M

CONTROL OF WORK

1.7 COOPERATION WITH UTILITIES

Add the following to sub-paragraph D:

1. The **Contractor** shall be required to meet with the Utility Companies identified in the plans prior to beginning any work on the project and develop a work schedule. The Utility Companies require that a seven-day notice be given prior to the meeting in order for them to arrange to have representation. Notification of said meeting shall be given to the Region Utility Coordinator of when and where the meeting will be held. Said meeting shall be separate from the pre-construction conference and shall be held in order for the **Contractor** and the Utility Companies to coordinate and set a schedule for the relocation and/or adjustment of the utility company owned facilities that are within the limits of this project. The affected utilities may require the contractor to clear and grub and/or cut and fill, close to the final sub-grade in some areas in order for the utility companies to relocate and/or adjust there facilities.
2. A copy of the schedule shall be submitted to the **Engineer** within one week of the meeting. UDOT's **Engineer** shall be made aware of any and all changes to the schedule.
3. Once a schedule has been agreed to between the **Contractor** and the utility company, additional compensation will not be allowed for any delays, inconvenience, or damage sustained due to any interference from the utility appurtenances or the operation of relocating and/or adjusting them. Costs associated with delays attributable to action or inaction by the utility company, that is not in accordance with the schedule agreed to by the **Contractor** and utility company will be evaluated by the UDOT. Any changes to the schedule shall be agreed to by the **Contractor** and the utility company. UDOT's Project Engineer shall be made aware of any and all changes to the schedule.

END OF SECTION

April 7, 2003

SPECIAL PROVISION

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SECTION 01282M

PAYMENT

Delete Article 1.13 G2 and renumber 3 to 2

END OF SECTION

SPECIAL PROVISION

SP-0068(22)50

SECTION 01557S

MAINTENANCE OF TRAFFIC (MOT)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. MOT Maintainer
- B. Maintenance of Traffic (MOT) plans, Materials, and labor necessary for implementation.
- C. Variable message signs and construction signs

1.2 RELATED SECTIONS

- A. Section 00555: Prosecution and Progress.
- B. Section 01554: Traffic Control.
- C. Section 02842: Delineators.
- D. Section 02891: Traffic Signs.

1.3 REFERENCES

- A. Manual on Uniform Traffic Control Devices, Latest Edition (MUTCD).
- B. UDOT Standard Drawings.
- C. American Traffic Safety Services Association (ATSSA)

1.4 DEFINITIONS

- A. Maintenance of Traffic (MOT) is defined as the work necessary to advise the public of changes to normal traffic flow, and to indicate planned detours and alternate routes to closed roads. It is intended to be used solely as advisory information to the public.

1.5 POST-BID REQUIREMENTS

- A. DEPARTMENT will provide MOT plans to be implemented as part of the bid package.
- B. The apparent low bidder will attend a mandatory meeting as detailed in Section 01554.
- C. Attendees of the mandatory meeting will review the CONTRACTOR's submitted traffic control plans and the DEPARTMENT's supplied MOT plans for compatibility. Modify plans where necessary, as set forth in Section 01554.
- D. Do not begin work on the project until written approval of the MOT plan is received from the ENGINEER. No item of work can begin until the approved MOT plan is implemented for that phase of work.

1.6 MOT MAINTAINER

- A. The Traffic Control Maintainer, as specified in Section 01554 is responsible for maintenance of MOT on the project. No separate payment will be made for maintenance of MOT.
- B. Inspect MOT devices daily for compliance with the MOT plans. Submit daily inspection reports on a form acceptable to the ENGINEER. Record readings from devices using hour meters on the form.

1.7 MAINTENANCE OF MOT DEVICES

- A. Maintain traffic control devices per Section 01554.

1.8 WAGE RATES FOR TRAFFIC CONTROL PERSONNEL (FEDERAL AID JOBS ONLY)

- A. Refer to Section 01554 for wage rate information.

1.9 PAYMENT PROCEDURES

- A. Partial Payments - Based on the percentage of the project completed, excluding the cost of MOT.
 - 1. Failure to comply with any of the requirements of this special provision will result in non-compliance.
- B. Price Adjustments:
 - 1. The Department reduces payment if the MOT implemented is not in compliance with the approved MOT plan, as determined by the ENGINEER.
 - 2. The amount per day by which the CONTRACTOR's compensation will be reduced is calculated using the daily charge in the Schedule of Liquidated Damages in Table 1 of Section 00555 or the Contract lump sum bid price for MOT divided by the number of Contract days, whichever is greater.
- C. Payment for change in scope: Negotiate a price adjustment for MOT if the ENGINEER orders a change in the scope of work, which requires modification to the approved MOT Plan.

PART 2 PRODUCTS

2.1 SIGNS

- A. Refer to Section 02891, Traffic Signs.
- B. Type and configuration as directed by the MOT plans.

2.2 VARIABLE MESSAGE SIGNS (VMS)

- A. Advance warning device
 - 1. Conform to guidelines set forth in Section 6F-2 of the MUTCD.
 - 2. Messages can be changed on-site and by dial-up modem

PART 3 EXECUTION

3.1 MODIFICATION OF MOT PLANS

- A. ENGINEER may modify the MOT plans at any time.
- B. Implement changes to the MOT plan before the end of the work shift.

- C. Each phase of construction must be covered by an approved MOT plan. If a construction phase is proposed that is not covered by a DEPARTMENT supplied MOT plan, submit a proposed MOT plan to the ENGINEER for approval.
 - 1. Submit proposed MOT plan to the ENGINEER 10 working days before the proposed MOT plan is to be implemented.
 - 2. Do not begin work until the proposed MOT plan is approved for use, and has been fully implemented.

3.2 TRAFFIC CONTROL DEVICES

- A. Installation and Maintenance:
 - 1. Install appropriate devices for each construction phase as identified in the appropriate MOT plan.
 - 2. Maintain devices to provide proper, continuous functionality.
 - 3. Wash devices weekly unless conditions warrant more frequent cleaning.
 - 4. Replace any device missing any part of the message or background.
- B. Channelizing Devices: Use as directed by the MOT plan.
 - 1. Furnish a daily record of the number and location of all traffic control devices in use.
 - 2. Remove devices from the site of work when they are not needed for the immediate control of traffic.

3.3 VARIABLE MESSAGE SIGN (VMS)

- A. The DEPARTMENT will retain control of messages appearing on the VMS. The CONTRACTOR will not change the location or the message configuration of the VMS unless directed to by the ENGINEER in writing.
- B. Place in view of oncoming traffic without obstructing traffic flow. Relocate VMS to match field conditions at no additional cost to DEPARTMENT.
- C. Provide dial-up modem number to the ENGINEER.
- D. Use necessary traffic control devices with VMS to provide safe operation.
- E. Remove devices from the site of work when they are not needed for the immediate control of traffic.
- F. Unless directed by the Engineer, display advance notification VMS messages for a minimum of 7 days prior to any traffic impacts such as start of work, change in traffic directions, etc. at each end of the project.

- G. Make two VMS signs available at all times during the project to be used as directed by the ENGINEER at no additional cost to the DEPARTMENT.

END OF SECTION

SPECIAL PROVISION

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SECTION 01575S

INVASIVE WEED CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Weed species subject to control are listed on the Utah State Noxious Weed List, the county(s) weed list based on the project location, and any other additional species listed in the specifications. Project documents list which weeds are likely to be found on the project site. The Utah State Noxious Weed List and each county's weed list is attached.

1.2 RELATED SECTIONS

- A. Section 02912: Topsoil.
- B. Section 02922: Seed, Turf Seed, and Turf Sod.
- C. Section 02936: Vegetation Establishment Period.

1.3 PAYMENT PROCEDURES

- A. Include payment for cleaning earthmoving construction equipment under mobilization.
- B. Control of invasive weeds using pre-emergent, selective, and non-selective herbicides will be paid by the unit area.

1.4 REGULATORY REQUIREMENTS

- A. Follow all regulatory, application, and safety precautions listed by the herbicide manufacturer.

- B. Use only licenced pesticide applicator personnel to apply herbicides.

PART 2 PRODUCTS

2.1 HERBICIDE

- A. See the attached list of noxious weeds subject to control and the recommended herbicide for each species.
- B. Use commercially available herbicides specified to control weed species identified.

PART 3 EXECUTION

3.1 CLEANING EQUIPMENT

- A. Using high pressure water blasting or steam cleaning methods, clean all earthmoving construction equipment (scrapers, bulldozers, excavators, backhoes, trenchers) of dirt, mud and seed residue before initially entering the project.

3.2 PREPARATION

- A. Avoid any unnecessary disturbance of project areas known to be infested with noxious weeds.
- B. Minimize soil disturbance within right-of-way.
 - 1. Keep all construction operations within slope stake limits.
 - 2. If soil disturbance outside slope stake limits is necessary, observe the following:
 - a. Keep disturbed area to a minimum.
 - b. Monitor and control disturbed areas and topsoil stockpiles for growth of weeds species subject to control.
 - c. Revegetate in accordance with the landscape plans or other project specifications when disturbance is no longer necessary.

3.3 CONTROLLING INVASIVE WEEDS

- A. Control invasive weeds. Use pre-emergent, selective, and non-selective herbicides as appropriate. See paragraph B.
 - 1. Inspect and monitor erosion control and other disturbed soils throughout construction.

2. Inspect and monitor landscaping/seeding during the vegetation establishment period.

B. Noxious Weed Table:

Utah State Noxious Weeds		
Common Name	Scientific Name	Herbicide
Bermudagrass*	<i>Cynodon dactylon</i>	glyphosate
Bindweed	<i>Convolvulus spp.</i>	Dicamba+2,4-d or picloram
Broad-leaved Peppergrass	<i>Lepidium latifolium</i>	metsulfuron or chlorsulforn
Canada Thistle	<i>Cirsium arvense</i>	2,4-D, dicamba, picloram
Diffuse Knapweed	<i>Centaurea diffusa</i>	2,4-D+dicamba or picloram or clopyralid
Dyers Woad	<i>Isatis tinctoria</i>	2,4-D+dicamba or chlorsulfuron
Perennial Sorghum spp (Johnsongrass)	<i>Sorghum halepense, Sorghum Almum</i>	glyphosate
Leafy Spurge	<i>Euphorbia esula</i>	dicamba or picloram
Medusahead	<i>Taeniatherum caput-medusa</i>	glyphosate
Musk Thistle	<i>Carduus nutans</i>	2,4-D amine, metsulfuron or picloram
Purple Loosestrife	<i>Lythrum salicarial</i>	glyphosate (Rodeo Aquatic label)
Quackgrass	<i>Agropyron repens</i>	Glyphosate
Russian Knapweed	<i>Centaurea repens</i>	Picloram or clopyralid or chlorsulfuron
Scotch Thistle	<i>Onopordium acanthium</i>	2,4-D amine, metsulfuron or picloram
Spotted Knapweed	<i>Centaurea maculosa</i>	2,4-D+dicamba, picloram or clopyralid
Squarrose Knapweed	<i>Centaurea squarrosa</i>	Picloram
Whitetop	<i>Cardaria spp</i>	2,4-D+dicamba or chlorsulfuron
Yellow Starthistle	<i>Centaurea solstitialis</i>	picloram or clopyralid
*Bermudagrass (<i>Cynodon dactylon</i>) shall not be a noxious weed in Washington County		

County Noxious Weeds		
Cache County		
Common Name	Scientific Name	Herbicide
Goatsrue	<i>Galega officinalis</i>	2,4-D+dicamba
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
Puncture Vine	<i>Tribulus terrestris</i>	2,4-D+dicamba
Carbon County		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
Davis County		
Common Name	Scientific Name	Herbicide
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
Buffalobur	<i>Solanum rostratum</i>	2,4-D+dicamba
Yellow Nutsedge	<i>Cyperus esculentus</i>	glyphosate
Duchesne County		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
Grand County		
Common Name	Scientific Name	Herbicide
Purple Loosestrife	<i>Lythrum salicarial</i>	glyphosate (Rodeo Aquatic label)
Juab County		
Common Name	Scientific Name	Herbicide
Water Hemlock	<i>Cicuta maculata</i>	2,4-D, or dicamba
Kane County		
Common Name	Scientific Name	Herbicide
Poison Hemlock	<i>Conium maculatum</i>	2,4-D+dicamba
Rich County		
Common Name	Scientific Name	Herbicide
Black Henbane	<i>Hyoscyamus niger</i>	2,4-D+metsulfuron

San Juan County		
Common Name	Scientific Name	Herbicide
Silverleaf Nightshade	<i>Solanum elaeagnifolium</i>	Imazapyr or glyphosate
Buffalobur	<i>Solanum rostratum</i>	2,4-D or dicamba
Whorled Milkweed	<i>Asclepias subverticillata</i>	2,4-D or dicamba
Sanpete County		
Common Name	Scientific Name	Herbicide
Houndstonge	<i>Cynoglossum officinale</i>	2,4-D or dicamba
Uintah County		
Common Name	Scientific Name	Herbicide
Russian Olive	<i>Elaeagnus angustifolia</i>	2,4-D, dicamba, or glyphosate
Purple Loosestrife	<i>Lythrum salicaria</i>	glyphosate (Rodeo Aquatic label)
Washington County		
Common Name	Scientific Name	Herbicide
Poison Milkweed	<i>Asclepias subverticillata</i>	2,4-D, or dicamba
Weber County		
Common Name	Scientific Name	Herbicide
Puncture Vine	<i>Tribulus terrestris</i>	2,4-D+dicamba
Use rates: Use rates for herbicides vary, follow the use rate on the LABEL for each herbicide		

END OF SECTION

SPECIAL PROVISION

SP-0068(22)50

SECTION 01721S

SURVEY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule, coordinate and provide all construction surveying, staking, surface area and volume quantity computations, and calculations essential to complete the project and properly control the entire work.
- B. Directed surveying as requested by the ENGINEER.

1.2 RELATED SECTIONS

- A. Section 02896: Boundary Survey

1.3 MEASUREMENT PROCEDURES

- A. Directed Survey: If extra survey work is needed, directed Survey 2-Person Crew will be measured by the hour authorized. Department will make no additional payment for travel time to and from the project.
- B. Directed Survey: If extra survey work is needed 3-Person Crew will be measured by the hour authorized. DEPARTMENT will make no additional payment for travel time to and from the project.

1.4 PAYMENT PROCEDURES

- A. Survey will not be paid as a separate item, but will be included in all items of work that require surveying. Failure to comply with any portion of this specification may result in withholding up to 25% of contract payments until the deficiencies are corrected.

- B. If needed and approved, directed survey work will be paid for in the accepted quantities at the following rates:
- | | |
|----------------------|-------------------|
| 2 person survey crew | \$130.00 per hour |
| 3 person survey crew | \$155.00 per hour |
- C. If needed, payment for computations and/or drafting will be paid for at a rate to be agreed upon prior to proceeding with directed survey work. The number of hours required for computations and drafting cannot exceed 33% of actual survey hours and will be established on a percent basis prior to directed survey work starting.
- D. No payments, partial or final, will be made without approved quantity submittals.

1.5 SUBMITTALS

- A. The Department requires that a Professional Engineer or Professional Land Surveyor duly and properly registered in the State of Utah sign and seal all submittals.
- B. Resubmittals may be required depending on completeness and correctness of the work.
- C. Prior to beginning work, submit a statement indicating that the contractor has field checked all DEPARTMENT-provided horizontal and vertical control and has determined the control to be accurate within the tolerances specified in Part 3.4. Attach field survey information used to verify control. If discrepancies are found, notify the ENGINEER verbally and in writing.
- D. Prior to beginning work, provide a written description of the equipment (including calibration certification), manpower, methods and data storage format the contractor proposes to use to complete all survey activities.
- E. Submit electronic files, plots and calculations of appropriate bid item quantities to the Engineer for review and approval, a minimum of 3 working days prior to the pre-determined estimate cut-off date.
- E. Submit plots of the original cross sections in Microstation format and superimpose the design cross sections as slope staked.
- F. Record-keeping: Keep all field notes, diaries, books and electronic files according to standard surveying practice.
1. Loose leaf books will not be accepted.
 2. Make available at any time any and all survey records including field notebooks and forms used for the work to the ENGINEER upon verbal or written request.

3. During construction, keep all documentation at a location approved by the ENGINEER.
- G. After project completion, return to the ENGINEER all surveying and design data and “as staked/constructed” drawings in Microstation format clearly showing all final dimensions, lines, grades, tie-ins and deviations from contract plans.

1.6 QUALITY ASSURANCE

- A. CONTRACTOR is responsible for survey and control of the work, and for correcting CONTRACTOR errors, whether the errors are discovered during the actual survey work or in subsequent phases of the project. CONTRACTOR bears any cost overruns resulting from CONTRACTOR errors.
- B. Complete a preliminary verification of the plans and specifications prior to beginning construction.
1. Immediately notify the ENGINEER of any discrepancies or deficiencies including discrepancies in grade, elevations, alignment, locations and/or dimensions.
 2. As the work progresses notify the ENGINEER of any discrepancies between the field survey and contract plans.
- C. CONTRACTOR is not relieved by Submittal acceptance of the responsibility for maintaining the survey work and for correcting errors, whether the errors are discovered during the actual survey work or in subsequent phases of the project.
- D. Qualifications: Furnish technically qualified survey crews and crew supervisor experienced in highway and bridge surveying and layout.
- E. Perform all work in accordance with the plans and specifications and standard Engineering and Surveying practices under the responsible charge of a Professional Engineer or Professional Land Surveyor duly and properly registered in Utah.
- F. The ENGINEER may spot check the work for accuracy and may reject unacceptable portions of work. Resurvey rejected work and correct work that is not within the specified tolerances at no additional expense to the DEPARTMENT.
- G. The Engineer will randomly field verify a minimum of 5% of the submitted quantities for bid items involving area and volume measurements. When calculations are not within 5%, the engineer will review and check calculations to resolve differences.

- H. Changes in alignment, grade, or scope of work that change the earthwork quantities will be calculated and that quantity will be treated as a change in the plan quantities. Payments will be as per section 01282 of UDOT's 2002 Imperial Standard Specifications For Road and Bridge Construction, CSI Format.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Furnish tools, supplies and stakes suitable for use in highway survey work.
- B. Furnish stakes and hubs of sufficient length to provide a solid set in the ground with sufficient surface area above ground for necessary legible markings.
- C. Furnish survey instruments and supporting equipment capable of achieving the specified tolerances. Calibrate survey equipment for accuracy prior to beginning survey work and as required. Document that all equipment is functioning within manufacturer's tolerances.

PART 3 EXECUTION

3.1 PREPARATION

- A. Before survey work begins, discuss and coordinate the following with the ENGINEER:
 - 1. Required submittals
 - 2. Survey and staking methods
 - 3. Stake markings
 - 4. Grade control
 - 5. Referencing
 - 6. Structure control
 - 7. Any other procedures and control necessary for the work
 - 8. Documentation procedures
- B. Establish construction survey points, elevations and grades as necessary to control layout and complete the work. Verify all control surveying and staking meets specified tolerances prior to beginning work.
- C. Calculate all grades, elevations, offsets and alignment data necessary for staking and/or setting items of work. Obtain approval from the ENGINEER for alternate

methods of establishing grade control with wire lines, computer or laser controlled grading or other suitable methods.

- D. Provide appropriate traffic control for all survey activities.
- E. The DEPARTMENT will furnish:
 - 1. Plans showing locations of control points
 - 2. Plans showing locations of Bench Marks
 - 3. Cross sections developed during design, if any
 - 4. Electronic project data, if any
 - 5. Digital Terrain Model used for design, if any

3.2 DIRECTED SURVEY

- A. Conduct directed surveying if requested by the ENGINEER.
 - 1. Includes work needed for changes and extra work. Provide all labor, materials and equipment including but not limited to global positioning satellite equipment.
 - 2. Obtain prior written authorization from the Engineer documenting the affected work and requirements before performing work under these items.

3.3 COMPUTATIONS AND PLOTS

- A. Use electronic cross-sections, Microstation format, to calculate pay items that require volume measurements.
 - 1. Calculate preliminary quantities from this data, using the average end area method and submit plots and calculations to the ENGINEER for approval.
 - 2. When work is complete, superimpose final cross sections with original cross sections and calculate final quantities using the average end area method.
 - 3. ENGINEER may approve alternate methods for calculating quantities.
- C. Develop cross-sections from field measurements.
 - 1. Take cross section measurements both before and after excavation and prior to backfill.
 - 2. When the centerline curve radius is less than or equal to 500 ft, take cross sections at a maximum centerline spacing of 25 ft.
 - 3. When the centerline curve radius is greater than 500 ft, take cross sections at a maximum spacing of 50 ft.
 - 4. Take additional cross sections at breaks in terrain and at changes in typical sections.

5. For each cross section, measure and record points at breaks in terrain, but at least every 25 ft unless otherwise approved by the ENGINEER.
 6. Measure and record points to at least the anticipated slopes and reference locations.
 7. Reduce all cross section distances to horizontal distances from centerline.
 8. Take cross sections at right angles to tangents and normal to curves.
 9. Include in cross sections all grades, locations, and existing ground line profiles.
- D. CONTRACTOR may develop cross-sections from digital terrain models provided that:
1. The ground survey locations do not exceed 100 ft in any direction.
 2. Major breaks in terrain are also included.
 3. The horizontal and vertical control for the project is used.
 4. The DTM is verified accurate to required tolerances by spot-checking throughout the length of the project.

3.4 STAKE MAINTENANCE AND MARKING

- A. Maintain ALL staking necessary for the work until the construction has been completed and accepted by the ENGINEER.
1. Legibly mark all survey stakes with station and offset referenced to their respective control line.
 2. Mark slope, reference and guard stakes with station.
 3. Renew illegible stakes at no additional cost to the DEPARTMENT.
- B. Provide and maintain reference stakes that identify stationing at least every 100 ft until all work has been completed and accepted by the ENGINEER.

3.5 CONTROL POINT AND SURVEY TOLERANCES

- A. Relocate initial horizontal and vertical control points in conflict with construction to areas that will not be disturbed by construction operations. Furnish the coordinates, elevations and survey notes for the relocated points before the initial points are disturbed.
- B. Protect bench marks from construction activities. Position all bench marks to allow a level rod to stand vertically and squarely on the mark. Reference bench marks to centerline and horizontal measurements.
- C. Survey and establish control within the following tolerances:

Table 1

Survey Tolerances		
Description	Horizontal	Vertical
Control points	+/- 0.01 ft	+/- 0.01 ft
Centerline points	+/- 0.03 ft	+/- 0.02 ft
Cross sections and slope stakes	+/- 0.10 ft	+/- 0.10 ft
Slope stake references	+/- 0.10 ft	+/- 0.10 ft
Culverts and ditches	+/- 0.10 ft	+/- 0.05 ft
Minor drainage structures	+/- 0.10 ft	+/- 0.03 ft
Curb and gutter	+/- 0.03 ft	+/- 0.02 ft
Guardrail	+/- 0.10 ft	+/- 0.05 ft
Retaining walls	+/- 0.10 ft	+/- 0.02 ft
Bridge substructure and overall	+/- 0.01 ft	+/- 0.01 ft
Bridge superstructure and overall	+/- 0.01 ft	+/- 0.01 ft
Clearing and grubbing limits	+/- 1.5 ft	-----
Right of Way Limits	+/- 0.02 ft	-----
Roadway subgrade and finish stakes	+/- 0.10 ft	Meet tolerance of succeeding layer.
Signals, electrical and striping	+/- .05 ft	+/- 0.02 ft
Striping	+/- 0.15 ft	-----

Coordinate the survey tolerances of any items not listed above with the ENGINEER.

- D. Tolerances in Table 1 are subordinate to any tolerances listed in other specifications of that item.
- E. Staking limits:
1. Stake clearing limits on both sides of centerline at each established station. Locate the clearing limit on the ground as identified by slope stakes.

2. Stake right of way limits every 60 ft on tangents, every 30 ft on curves and at all right of way breaks.
- F. Furnish reference stakes for all slope stakes and stakes used for setting items for work.
1. Maintain the reference stakes for the duration of the project until the ENGINEER approves removal.
 2. Establish and set slope stakes and references on both sides of centerline at cross section locations.
 3. Establish slope stakes in the field as the actual point of intersection of the design slope with the natural ground line.
 4. Set slope stake references outside the clearing limits.
 5. Include on the slope stake reference stakes all information necessary to establish offset and elevation of every PI on the typical section.
- G. After the slope staking is completed, record on the cross section guard stakes the vertical distance from the reference point (RP) to the construction grade, at a minimum horizontal distance of 10 ft outside the clearing limits or at right of way.
- H. Setting grade finishing stakes (redheads):
1. For grade elevations and horizontal alignment:
 - a. On centerline
 - b. On each shoulder at roadway cross-section locations and between centerline and shoulder with a maximum spacing of 15 ft.
 - c. At the top of subgrade and the top of each aggregate course.
 2. Locations:
 - a. Where turnouts are constructed, set stakes on centerline, on each normal shoulder, and on the shoulder of the turnout.
 - b. In parking areas, set hubs at the center and along the edges of the parking area.
 - c. Set stakes in all ditches to be paved.
 3. The maximum spacing between stakes along the alignment is 50 ft.
 4. Use brushes or guard stakes at each stake.
 5. Reset grade finishing stakes as many times as necessary to construct the subgrade and each aggregate course.

3.6 CONCRETE PAVING

- A. Place wire line on each side of screed for each placement.
- B. Set string line control with vertical and horizontal control points placed at a maximum spacing of 50 ft.
- C. Stake concrete joint and station stamp locations.

3.7 DRAINAGE STRUCTURES

- A. Stake drainage structures to fit field conditions and in coordination with the ENGINEER. The location of the structures may differ from the plans.
 - 1. Determine the slope catch points at inlets and outlets.
 - 2. Set reference points and record information necessary to determine structure length and end treatments.
 - 3. Stake ditches or grade to make the structure functional.
 - 4. Plot the profile along centerline of the structure to show the natural ground, the flow line, the roadway section, and the structure.
 - 5. Mark guard stakes with the following, when applicable:
 - a. Diameter, length and type of culvert (i.e. 18 in x 36 ft corrugated metal pipe (cmp))
 - b. The vertical and horizontal distance from the hub to the invert at the end of the culvert or any intermediate point as needed or directed
 - c. Flow line grade and slope of the pipe.
 - d. Station
 - 6. For storm sewers and waterlines provide a reference at a maximum spacing of 50 ft. Reference inverts of pipe at all manholes.

3.8 BRIDGES

- A. Set a minimum of 3 horizontal and vertical control reference points to be used for all surveying all bridge substructure and superstructure components, including but not limited to: pile locations and cutoffs, line and grade for abutments and bents, beam seats, anchor bolts and screed grades.
- B. Set intermediate slope stakes at bridge abutments to establish transitions. Place finish grade stakes on the centerline of abutment bearing and at the top of slope of all bridge berms. Place finish grade stakes on each side at top, mid-point or slope and toe of fill.

3.9 BOX CULVERTS

- A. Set horizontal and vertical control and reference points. Establish and reference the centerline, back of parapet, skew and flow line elevations at inlet, outlet and breaks.

3.10 CURB AND GUTTER

- A. Set curb and gutter staking at 25 ft intervals on tangent and 15 ft intervals on curve sections. Set line and grade for curb and gutter to the nearest 0.1 in of the proposed or established grade line.

3.11 GUARDRAIL

- A. Stake guardrail vertical and horizontal control at a maximum spacing of 25 ft on tangent sections and 15 ft on curved sections unless otherwise approved.

3.12 TRAFFIC STRIPPING

- A. Layout all temporary and Permanent traffic striping.
 - 1. Place references for traffic striping a minimum of 50 ft apart on tangents and a minimum of 25 ft apart on curves.

3.13 EXISTING SURVEY MONUMENTS

- A. Under the direction of a surveyor licensed in the State of Utah, locate and reference all private and public land survey monuments that may be destroyed by project construction activities prior to disturbing said monuments.
- B. Complete referencing and reestablishing said monuments at no cost to the DEPARTMENT and before project completion.
- C. In some counties the county surveyor references and reestablishes the monuments.
 - 1. Notify the county surveyor at least 30 days prior to the destruction of any monument.
 - 2. Coordinate the reestablishment of section corner and quarter corner monuments with the county surveyor.
 - 3. Submit drawings and notes showing references to section corners and quarter corners to the ENGINEER.
- D. If a monument is found during construction but is not shown on the contract plans and must be reset, the DEPARTMENT will pay for the additional work under the Directed Survey item.

3.14 CLEAN UP

- A. Remove and dispose of all flagging, lath, stakes and other staking material after the project is complete.

END OF SECTION

SPECIAL PROVISION

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SECTION 02082M

WATER METER

2.2 WATER METERS AND ACCESSORIES

Delete Paragraph B of Section 2.1 and replace with the following:

- B. Meter Yoke: 18 inches high (minimum) copper setter as manufactured by Ford or equal.

Delete Paragraph C of Section 2.1 and replace with the following:

- C. Meter Box:
 - 1. 18" x 30" ADS White Pipe (See Sheet DT-2)
 - 2. Free standing crush factor of 3000 pounds.

Delete Paragraph E of Section 2.1 and replace with the following:

- E. Pipe and Fittings:
 - 1. Type K copper for Sizes 2 inches and smaller.
 - 2. C900 dr14 for sizes larger than 2 inches.

Delete Paragraph H of Section 2.1 and replace with the following:

- H. Joint Seal Tape (Teflon)
 - 1. For fittings larger than 2", grease all bolts with FM grease and black 8mm poly.

Add the following to Part 3, Execution:

3.3 INSTALLING FURNISHED WATER METERS AND RELCOATED WATER METERS

- E. The relocated water meter currently located at station 37+04.51, 69.85' Lt., as shown on sheet UT-1, is a newly installed 2" meter and should be relocated.

3.4 INSTALLING RELOCATED FIRE HYDRANT

- A. Unless otherwise noted, replace all existing water service lines with new pipe from the main supply line to the fire hydrant.
- B. Coordinate the relocation of existing water meters with the water system authority.
- C. For relocated fire hydrant, use existing fire hydrant, yoke, box, and cover. Furnish pipe and fittings as necessary.
- D. Complete all work that is not completed by the water system authority.

3.5 INSTALLING RELOCATED SEWER CLEANOUT

- A. Unless otherwise noted, replace all existing sewer lines with new pipe from the existing cleanout to the relocated cleanout.
- B. Relocate sewer clean out located neat the pine at approximately station 42+90. Coordinate the relocation of existing cleanout with the sewer system authority and affected homeowner.
- C. Furnish pipe and fittings as shown on sheet DT-3 to complete the relocation of the sewer cleanout.
- D. Complete all work that is not completed by the sewer system authority.

END OF SECTION

SPECIAL PROVISION

SP-0068(22)50

SECTION 02222M

SITE DEMOLITION - PAVEMENT

Replace part 3.5 with the following:

**3.5 CONCRETE DITCH, CONCRETE CURB, CONCRETE CURB AND GUTTER,
RAISED ISLAND, BITUMINOUS CURB REMOVAL**

- A. Remove curb, curb and gutter, gutters, raised island, bituminous curb, and parts of such improvements to an existing joint or joint sawed with a vertical face.
- B. Remove material to provide proper grades and connections.

END OF SECTION

SPECIAL PROVISION

SP-0068(22)50

SECTION 02610M

PIPE CULVERTS

Add the following to Part 1:

1.4 ACCEPTANCE CRITERIA

- A. Pipe culverts accepted according to the criteria outlined in this section. The Engineer may require testing of any or all culverts for compliance with the criteria. The Engineer reviews and approves proposed corrections. The acceptance of pipe culvert is based on five requirements: 1) Horizontal and vertical alignment deviations; 2) Barrel distortions; 3) Damages to the pipe; 4) Joint fitting; 5) Coating integrity. Following is a description of the requirements:

1. **Horizontal and vertical alignment deviations**
Measure horizontal and vertical installation deviations from the culvert's final construction survey stakes. Do not exceed the tolerances shown on Table A of this section.
2. **Barrel distortions**
Measure load distortions along a straight line through the centerline of the pipe. Do not exceed the tolerances shown on Table A of this section.
3. **Damaged culverts**
Remove or repair pipe culverts that are irregular or distorted, have cracks, dents, holes, splits, or loose nuts or bolts. Remove all pipes with a damaged invert.
4. **Joints**
Remove all pipe culverts that have damaged joints that allow the culvert to leak. Re-install or remove all pipes that do not connect properly. Connect joints according to manufacturers recommendations. Provide a manufacturer Certificate of Compliance for the pipe joints.
5. **Coating integrity**
Repair all pipe coatings, according to manufacturer recommendations, that don't have the required thickness or that have been damaged. Provide a Manufacturer Certificate of compliance for the pipe coating.

Table - A TOLERANCES				
Alignment Tolerances			Distortions Gradual Ovaling or Elliptical	
Design Grade	Max. Line Deviation	Max. Grade Deviation	Nominal Pipe Diameter *	Maximum Distortions **
	Percent of Nominal Pipe Diameter	inch/100feet	inch	Inch
> 1 %	5	1 1/2	18	+/- 0 - 7/8
≤ 1 %	5	1	24	+/- 1 - 1/4
< 0.5 %		± 0.5	30	+/- 1 - 1/2
			36	+/- 1 - 7/8
			42	+/- 2
			48 +/-	+/- 2 - 3/8
Notes For nominal culvert diameters larger than 48 inch, use measured diameter to calculate 5 percent allowable distortion. * Maximum distortions are used to define dimensions associated with allowable pipe deflections. Measure directly or by use of a mandrel test. **				

January 16, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 02742S

PROJECT SPECIFIC SURFACING REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Required PG Asphalt or emulsion.
- B. Number of gyrations to use for Superpave Mix Design.

PART 2 PRODUCTS

2.1 MIXES

- A. Hot Mix Asphalt (HMA): (Refer to bid item for size)
 - 1. PG 64-28 Asphalt.
 - 2. $N_{\text{initial}} = 8$ $N_{\text{design}} = 100$ $N_{\text{final}} = 160$
- B. Open-Graded Surface Course:
 - 1. PG 64-28 Asphalt.

PART 3 EXECUTION Not used.

END OF SECTION

SPECIAL PROVISION

SP-0068(22)50

SECTION 02765S

PAVEMENT MARKING PAINT

Delete Section 02765 and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish Acrylic Water Based pavement marking paint meeting Federal Specification TTP-1952 D. And refer to 2.1 for resin requirement.
- B. Apply to asphaltic or concrete pavement as edge lines, center lines, broken lines, guide lines, symbols and other related markings.
- C. Remove pavement markings.

1.2 REFERENCES

- A. AASHTO M 247: Glass Beads Used in Traffic Paint.
- B. ASTM D 562: Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using the Stormer-Type Viscometer.
- C. ASTM D 711: No-Pick-Up Time of Traffic Paint.
- D. ASTM D 2205: Selection of Tests for Traffic Paints
- E. ASTM D 2743: Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography.
- F. ASTM D 3723: Pigment Content of Water-Emulsion Paints
- G. ASTM D 3960: Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
- H. ASTM D 4451: Pigment Content of Paints

- I. ASTM D 5381: X-Ray Fluorescence (XRF) Spectroscopy of Pigments and Extenders.
- J. Federal Standards 595B, 37875, 33538, 11105 and TTP-1952 D.

1.3 ACCEPTANCE

- A. UDOT ENGINEER:
 - 1. Randomly samples pavement-marking paint and submits to Central Chemistry Lab for acceptance.
 - 2. Randomly generates the location of each test and removes all loose or excess beads from the line prior to testing.
 - 3. Visually inspects each line to verify bead adhesion and compliance with specified line dimensions requirements.
 - 4. Verifies that the paint and beads are being applied within specified tolerances a minimum of once each production day.
 - 5. Verify quantities used by measuring both paint and bead tanks prior to and after application.
- B. Repaint any line or symbol failing to meet bead adherence and dimensional requirements.
- C. Repaint any line or symbol failing to meet the minimum application requirements for paint or beads.

PART 2 PRODUCTS

2.1 PAINT

- A. Choose an approved pavement marking paint from the UDOT Research Division "Accepted Products Listing." Follow Federal Standards 595B, 37875, 33538, and 11105. Meet the following requirements for Acrylic Water Based Paint:

CIELAB (L*a*b*) D65/10E		
White	Yellow	Red
L* 91.9 to 95.6	L* 70.0 to 72.7	L* 31.4 to 33.4
a* -1.8 to -2.1	a* 22.5 to 24.8	a* 51.6 to 52.6
b* 3.8 to 2.2	b* 89.7 to 73.9	b* 34.1 to 35.1

- 1. No-track time: Not more than 5 minutes when tested according to ASTM D 711.

2. Volatile Organic Compounds Content: Less than 1.25 lbs/gal
ASTM D 3960.
3. Free of lead, chromium, or other related heavy metals ASTM D 5381.
4. Pigment: Percent by weight: Acrylic Water Based minimum of 62.0 " 2.0
ASTM D 3723.
5. Total Solids: Percent by weight: Acrylic Water Based minimum of 77.0
ASTM D 2205.
6. Acrylic water based paint must contain a minimum of 40 percent, by
weight, 100 percent acrylic cross-linkable emulsion as determined by
infrared analysis and other chemical analysis available to UDOT. ASTM
D 2205
7. ASTM D 562, ASTM D 2743, ASTM D 4451 and ASTM D 5381: Tests
used to verify paint samples meet "Accepted Products Listing".

2.2 GLASS SPHERE (BEADS) USED IN PAVEMENT MARKING PAINT

- A. Specific Properties:
 1. Meet AASHTO M 247.
 2. Meet type II, uniform gradation.

PART 3 EXECUTION

3.1 PREPARATION

- A. Line Control.
 1. Establish control points at 100 ft intervals on tangent and at 50 ft intervals
on curves.
 2. Maintain the line within 2 inches of the established control points and
mark the roadway between control points as needed.
 - a. Remove paint that is not placed within tolerance of the established
control points and replace at no expense to the Department. Refer
to article 3.4
- B. Remove dirt, loose aggregate and other foreign material and follow
manufacturer's recommendations for surface preparation.

3.2 APPLICATION

- A. Pavement Marking Paint: Apply at the following rates:
 1. 4 inch Solid Line: From 270 to 350 ft/gal
 2. 4 inch Broken Line: From 1080 to 1400 ft/gal
 3. 8 inch Solid Line: From 135 to 175 ft/gal

- B. Replace pavement markings that are less than 14 wet mils in thickness.
- C. No payment for pavement markings placed in excess of 18 wet mils in thickness.
- D. Painted Legends and Symbols 1 gallon per 100 square feet.
- E. Glass Sphere (Beads): Apply a minimum of 8 lbs/gal of paint, the full length and width of line and pavement markings.
- F. Begin striping operations no later than 24 hours after ordered by the Engineer.
- G. At time of application apply lines and pavement markings only when the air and pavement temperature are:
 - 1. 50 degrees F and rising for Acrylic Water Based Paint.
- H. Comply with Traffic Control Drawing TC16

3.3 CONTRACTOR QUALITY CONTROL

- A. Application Rate: Verify that the paint and beads are being applied within specified tolerances prior to striping.

3.4 REMOVE PAVEMENT MARKINGS

- A. Use one of these removal methods:
 - 1. High pressure water spray
 - 2. Sand blasting
 - 3. Shot blasting.
- B. Use equipment specifically designed for removal of pavement marking material.

END OF SECTION

February 27, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 02771M

**CURBS, GUTTERS, DRIVEWAYS, PEDESTRIAN ACCESS
RAMPS, AND PLOWABLE END SECTIONS**

Add the following to Part 2, Products:

2.5 DETECTABLE WARNINGS

- A. Detectable Warning Surface – In-line truncated dome pattern that meets the requirements of Standard Drawing GW5. Provide a dark color (black or charcoal) that visually contrasts with adjoining concrete surfaces. Acceptable products for installation are as follows:
 - 1. Detectable Warning Panels – Fiberglass, homogenous UV stable, integral color, skid resistant, non-glare finished panels.
 - 2. Stamped Concrete.
 - 3. Precast Concrete Pavers.

Delete Paragraph E from Article 3.3, FINISHING CONCRETE.

Add the following to Part 3, Execution:

3.6 DETECTABLE WARNING SURFACE

- A. Panel Installation:
 - 1. Install panels directly on the cured concrete surface using adhesive and fasteners in accordance with manufacturer recommendations.

B. Stamped Concrete Installation:

1. Use color hardener and liquid stamp release agent in accordance with manufacturers recommendations. Refer to Section 02776.
2. Stamp detectable warning surface to produce a durable, consistent truncated dome pattern that meets the dimensional requirements as shown in Standard Drawing GW5.

C. Precast Concrete Paver Installation:

1. Construct as shown on the plans. Ensure the surface is even, and there is a tight fit between pavers.
2. Cut pavers to fit the angles shown on the pedestrian ramp detectable warnings area.

END OF SECTION

January 16, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 02776M

CONCRETE SIDEWALK, MEDIAN FILLER, AND FLATWORK

Add the following to Part 1, General:

1.2 RELATED SECTIONS

K. Section 02222: Site Demolition - Pavement

Add the following to Part 3, Execution:

3.5 REMOVE AND REPLACE STEPS

- A. Remove existing steps in accordance with Section 02222: Site Demolition – Pavement
- B. Replace the steps referred to on sheet RD-1, as shown in the details.

END OF SECTION

May 2, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 02821M

CHAIN LINK FENCING AND GATES

Delete Section 3.1 D and 3.1 E.

END OF SECTION

May 2, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 02892M

TRAFFIC SIGNAL

Delete Section 3.5 A. Conductors: And replace with the following:

A. Conductors:

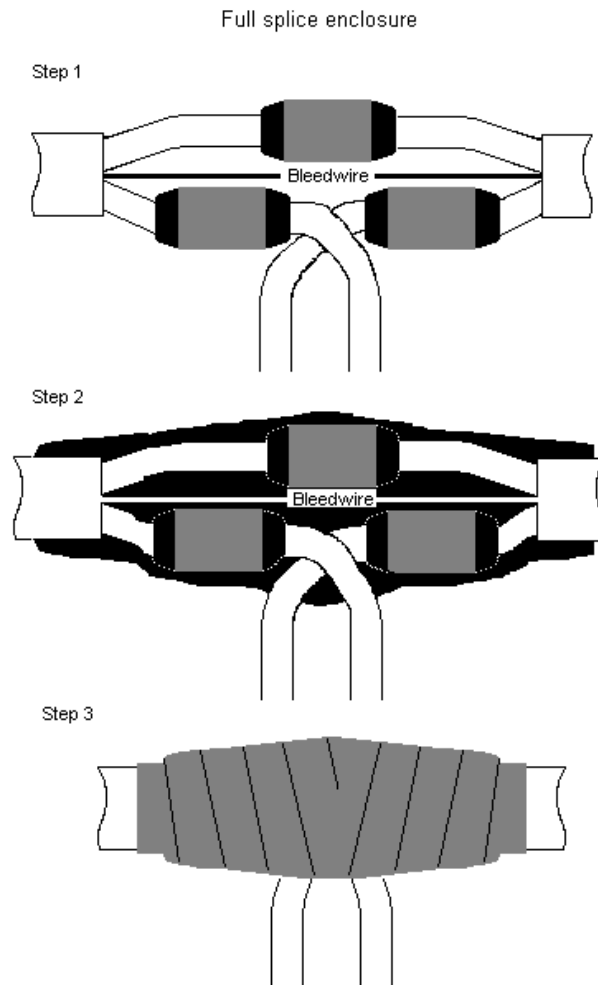
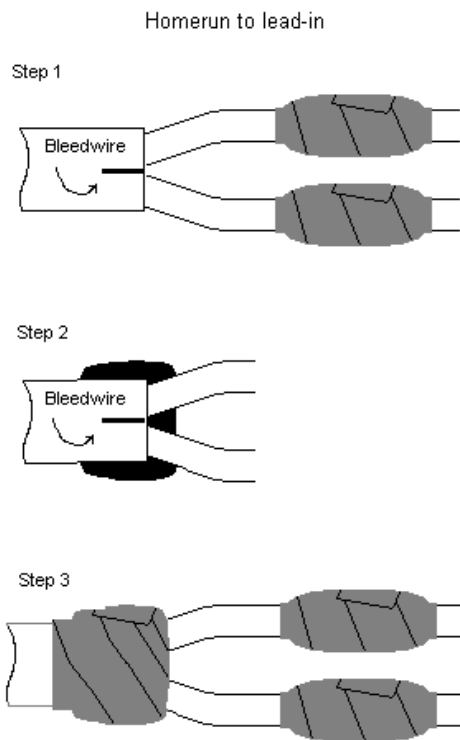
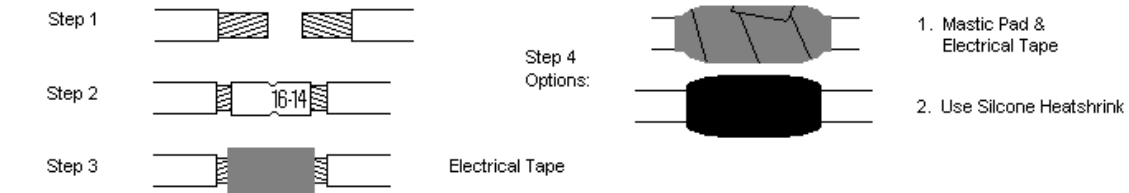
1. Clean and dry the inside of the conduit before installing conductors.
2. Install grounding conductor in all power circuit conduits.
3. Use approved lubricants when pulling conductors in conduit.
4. Tape the ends of unused conductors.
5. Use conductors that are color coded as specified. Meet IMSA 20-1.

Delete Section 3.5 E. Wire Splicing and replace with the following.

E. Wire splicing:

1. Splice wires only in detection circuits where the wire type changes in the junction boxes.
2. Mechanically secure and solder, individually insulate, and water seal all splices. Cover with silicon based heat shrink or mastic rubber pads and over wrap with vinyl electric tape.
3. Splicing procedures showing all steps required for each splice. Attached is a detail sheet explaining procedures:

Detail sheet for splicing wire & cable:



END OF SECTION

January 16, 2003

SPECIAL PROVISION

SP-0068(22)50

SECTION 13594M

FIBER OPTIC COMMUNICATION

Add the following to Part 3, Execution:

3.10 SPLICE DETAILS

- A. Follow the attached splice details in the installation of the Fiber Optic Communication System.

END OF SECTION

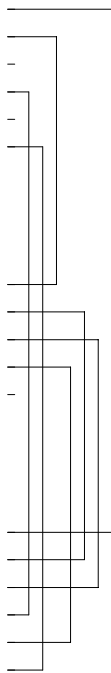
Enclosure id: 120,6 708 506
Location: Redwood & 6200 S
Street Address: 6200 S
Address Notes: SW Quad
Enclosure Manufacturer: Preform
Enclosure Part #: Coyote Pup
Splice Comments: 0 future entries & 1 splice tray

none:1029

Altos-30	1 to 2	(06) O
120,4 120,5 724	3 to 4	(02) fX
7000 S	5 to 8	-
	9 to 26	(00) O
	27 to 27	-
	28 to 30	(01) O

drop:1030	1 to 2	(02) fX
Altos-12	3 to 4	(04) fX
6200 S Radio	5 to 8	(05) fX
TSC Redwood & 6200 S	9 to 9	(03) fX
	10 to 12	-

none:1031	1 to 2	(06) O
Altos-30	3 to 4	(04) fX
Redwood to I-215, 123,1	5 to 8	(05) fX
Redwood & I-215 EB offramp	9 to 26	(00) O
	27 to 27	(03) fX
	28 to 30	(01) O



Enclosure id: Redwood to I-215, 123,1
Location: I215-7+725 RW
Street Address: Redwood & I-215 EB offramp
Address Notes: SW corner
Enclosure Manufacturer: Preform
Enclosure Part #: Coyote
Splice Comments: 0 future entries & 2 splice trays

none:12

Altos-72	1 to 18	(01) O
300,4 350,4 503	19 to 19	-
Redwood	20 to 42	(08) O
	43 to 44	(11) fX
	45 to 46	(12) fX
	47 to 48	(10) fX
	49 to 50	(09) fX
	51 to 52	(06) fX
	53 to 54	(02) fX
	55 to 56	(04) O
	57 to 58	(00) fX
	59 to 60	(07) fX
	61 to 62	(05) fX
	63 to 72	(03) O

none:623

Altos-72	1 to 18	(01) O
301,1 Branch 300,5 350,5 504	19 to 19	(13) fX
Redwood	20 to 42	(08) O
	43 to 44	(15) fX
	45 to 46	(16) fX
	47 to 48	(20) fX
	49 to 54	-
	55 to 56	(04) O
	57 to 58	(17) fX
	59 to 60	(18) fX
	61 to 62	(19) fX
	63 to 72	(03) O

none:626

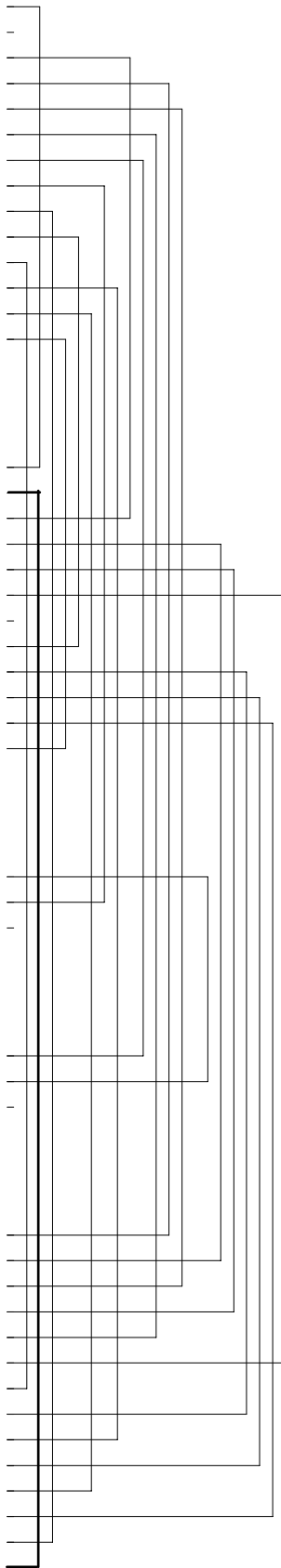
Altos-12	1 to 2	(14) fX
123,2 123,3	3 to 4	(06) fX
5600 S	5 to 12	-

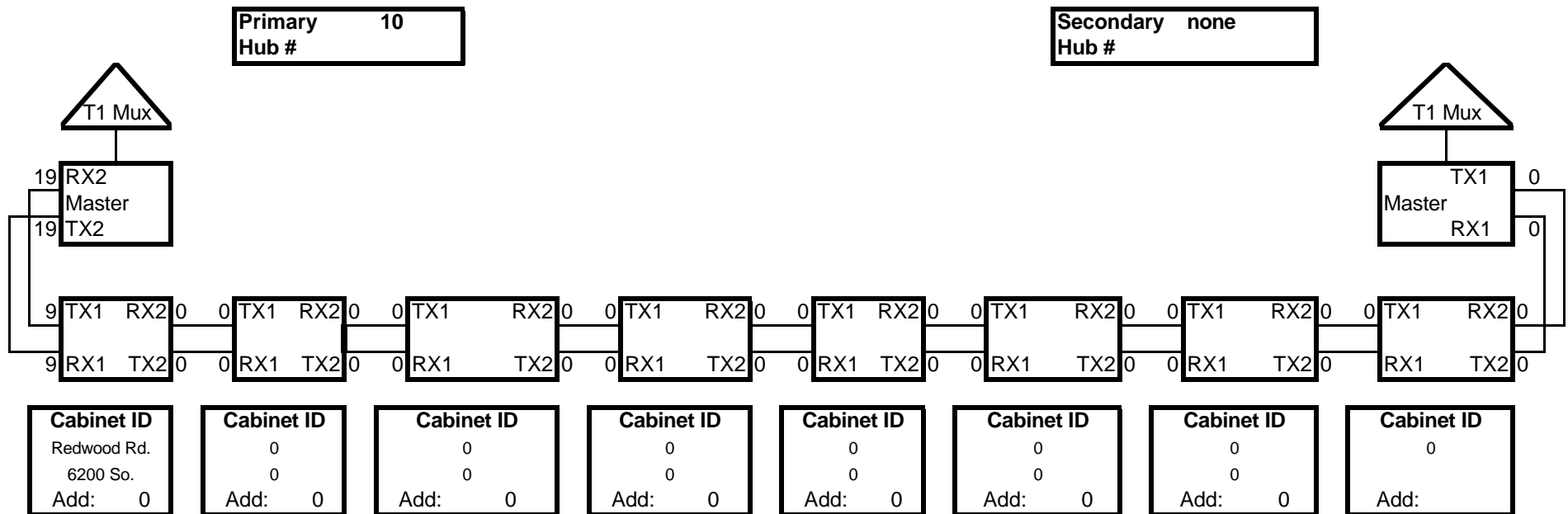
drop:649

Altos-6	1 to 2	(09) fX
Redwood & I215 EB Off ramp	3 to 4	(14) fX
TSC Redwood & I-215	5 to 6	-

none:1031

Altos-30	1 to 2	(11) fX
120,6 708 506	3 to 4	(15) fX
6200 S	5 to 6	(12) fX
	7 to 8	(16) fX
	9 to 10	(10) fX
	11 to 12	(20) fX
	13 to 14	(00) fX
	15 to 16	(17) fX
	17 to 18	(07) fX
	19 to 20	(18) fX
	21 to 22	(05) fX
	23 to 24	(19) fX
	25 to 26	(02) fX
	27 to 27	(13) fX





Channel Schematic Diagram

Revision: 1

Channel:	V506	Active Hub:	10
Prepared by:	Craig Wright	Date:	11/27/2002
ATMS Tech.		Date:	
QC Inspector:		Date:	
UDOT Inspector:		Date:	